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Drug & Cosmetic INDUSTRY

DECEMBER 1944

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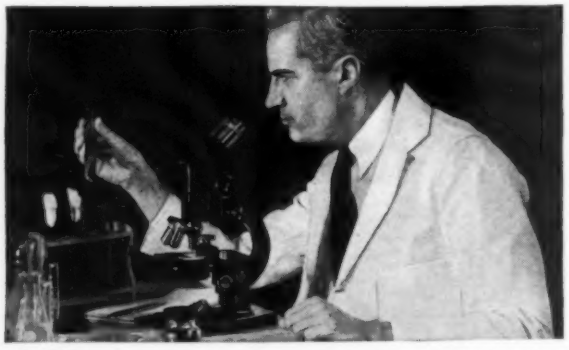
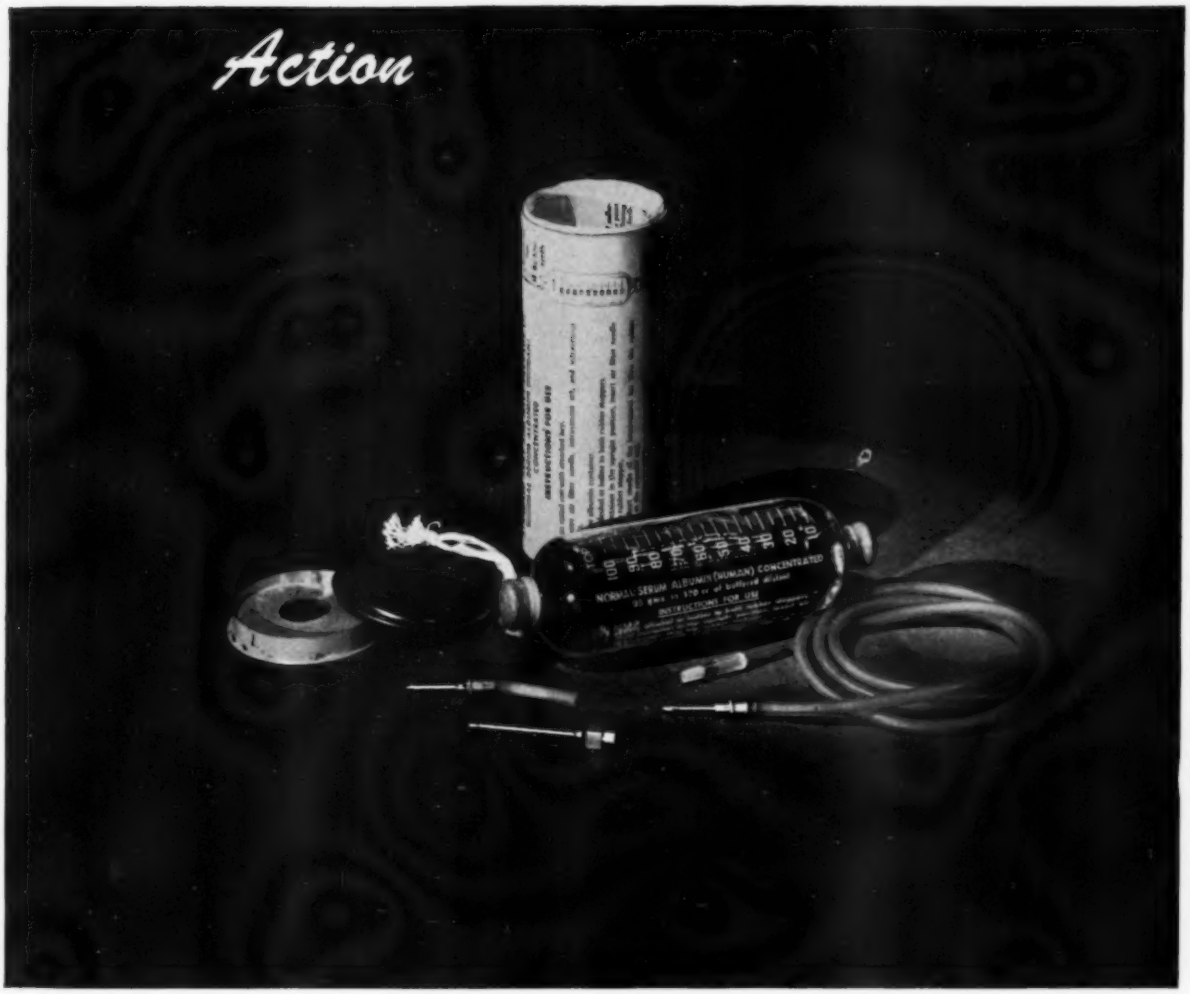
Safe against gas—thanks to a cellophane bag—made with glycerine. Glycerine is favored in making cellophane. Since it is non-toxic, it is safe to use in cellophane for all kinds of purposes.



Glycerine and you. If you've been using emergency substitutes, you can now come back to safe, time-tested glycerine in making foods and food products, plastics, paints, textiles, drugs, cosmetics, etc.



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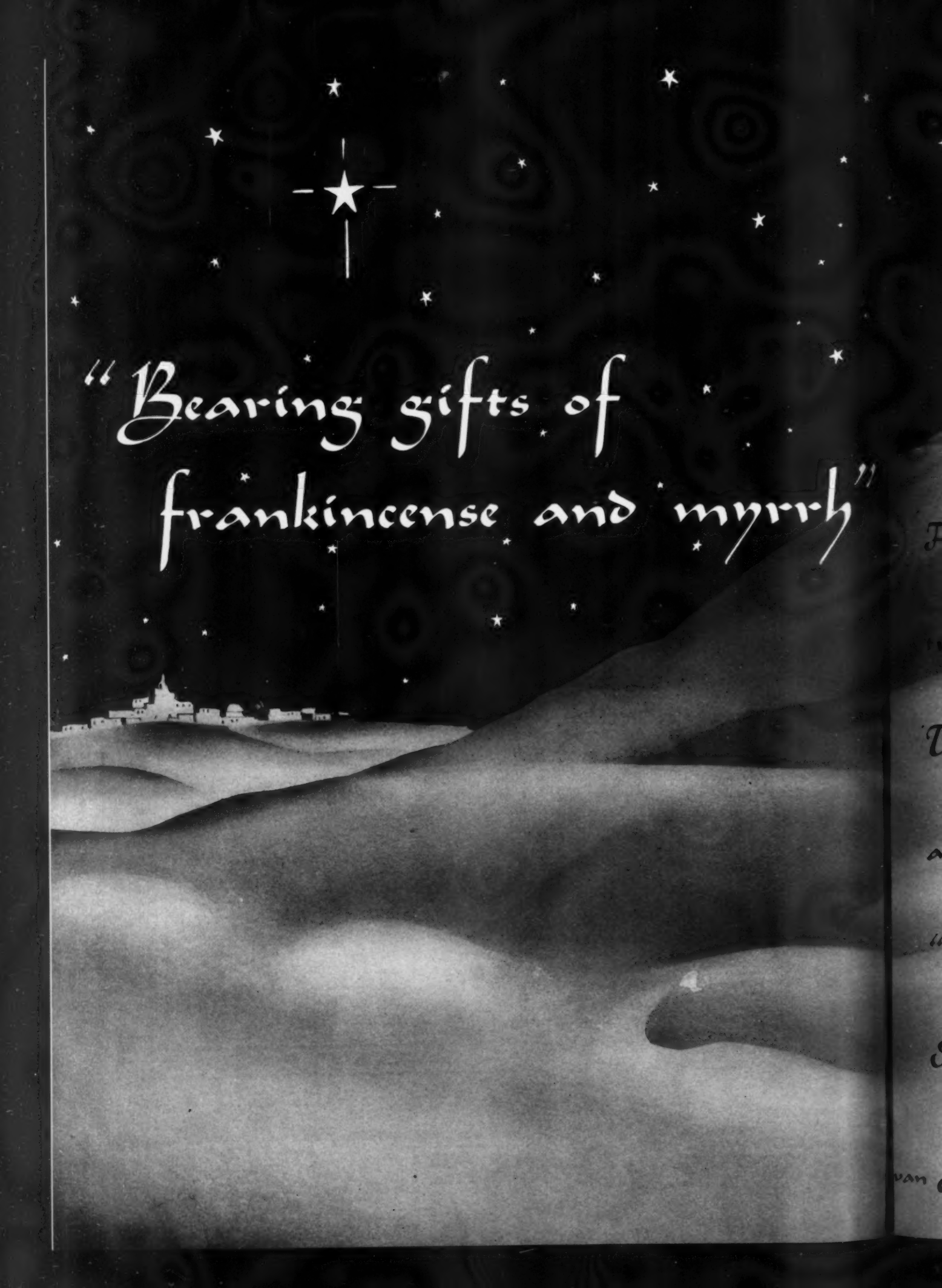
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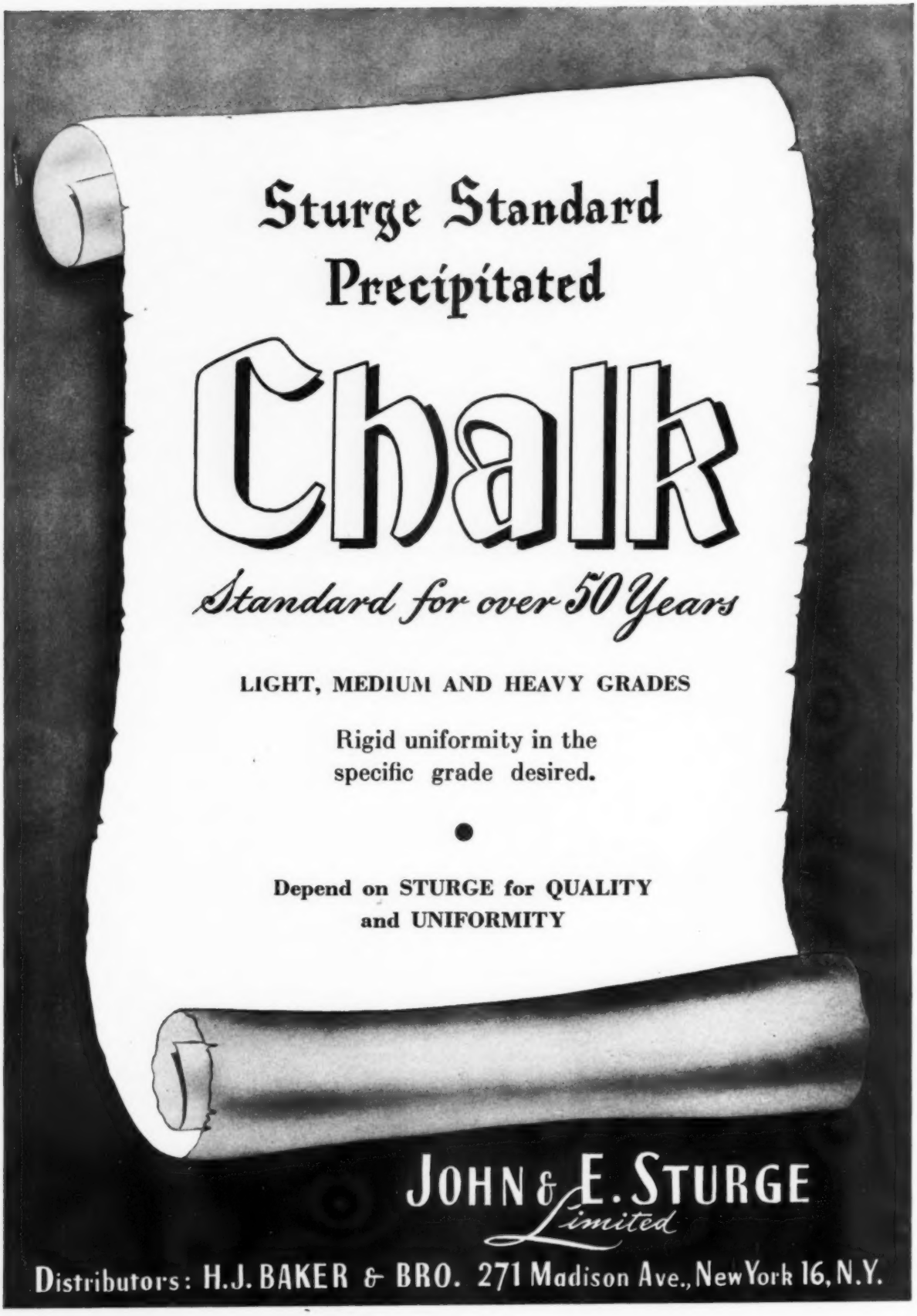
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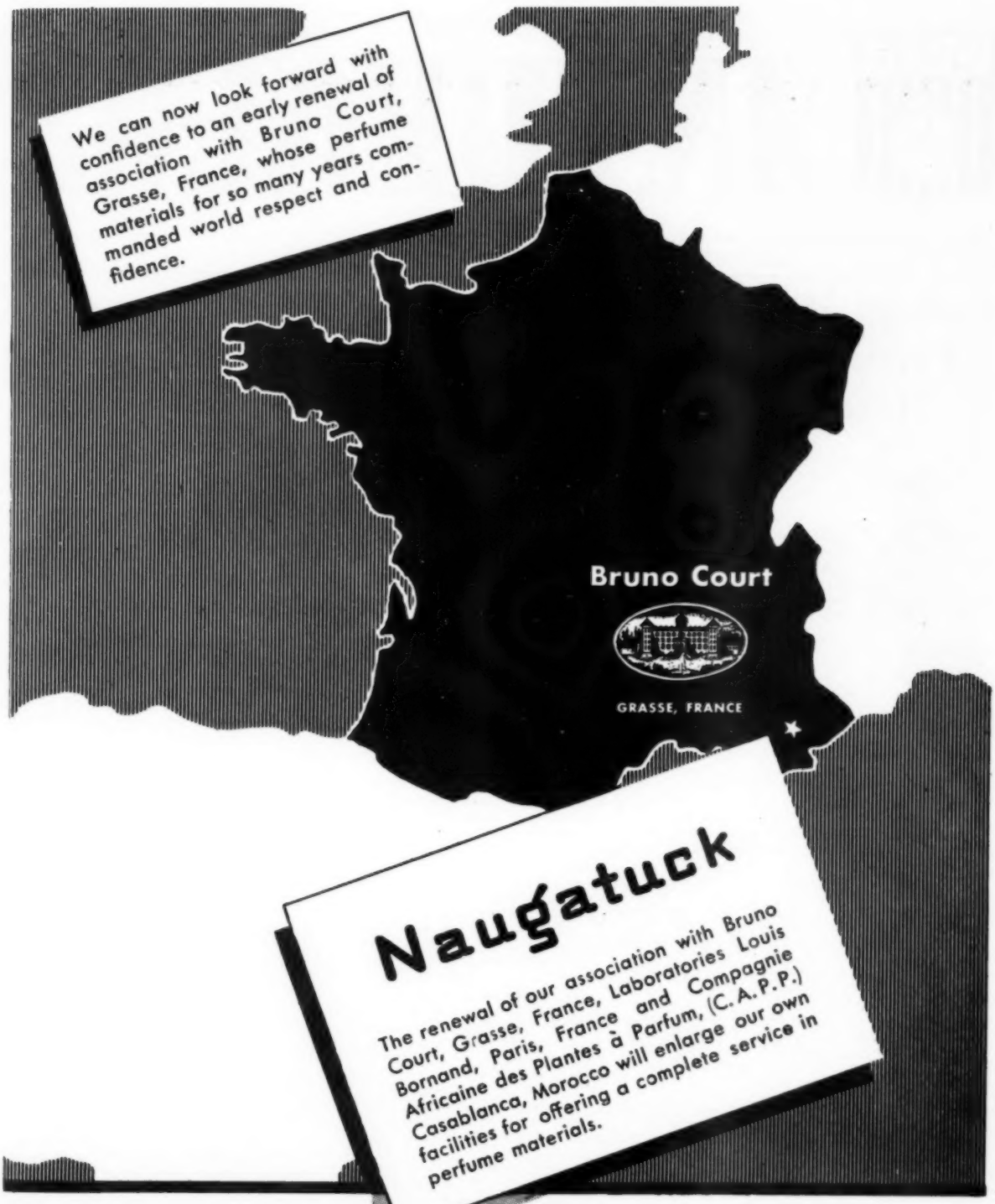
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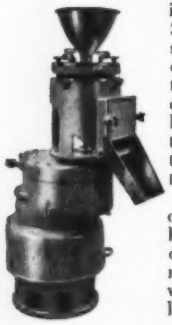
INSIDE NEWS

DECEMBER PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1944

Colloid Mill Treatment Permits Continuous Homogenizing Process



Paste type mill direct connected to motor

The first colloid mill was introduced into the United States 20 years ago, and since that time continuous improvement has taken place whereby a continuous rather than a batch process is used for the various mixing functions in processing industries.

A colloid mill permits continuous processing in homogenizing, dispersing, disintegrating, grinding, mixing, extracting, as well as emulsifying solids, liquids and pastes.

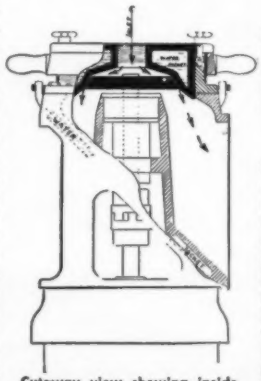
Typical industries using colloid mills are those processing food and food preparations, pharmaceuticals, and chemicals, paints, plastics and synthetic rubber. This method is also used for flavoring extracts and emulsions and processing products such as mustard, mayonnaise and salad dressings.

Superior homogenized products are assured by the uniform distribution of fat globules throughout the mix. Dispersion of solids in liquids, solids in solids, or liquids in liquids results in a more finely divided colloidal suspension and instantaneous chemical reactions. Animal or vegetable tissues can be disintegrated so completely that every particle of fiber or cellulose is instantly exposed to the extractive action of the suspending liquid.

The simplest colloid mill is of vertical design. It allows for gravity feed at inlet and gravity flow at exit. A special device for the accurate centering of the rotor and stator assures the highest operating efficiency at all times. The only moving part is the rotor. Smooth rotor and stator provide longer service under the action of abrasive materials. Abrasive rotors and stators are employed for grinding animal or vegetable tissue or fiber. Also, rotors and stators of stainless steel or other metals are used depending upon the application.

High-speed mixer employing colloid mill principle

Material flows into the colloid mill by gravity through inlet and comes in contact with high speed rotor. This acts as a centrifugal pump to drive the material between the rotor and stator, through a clearance calibrated from 0.001″ upwards. Hydraulic shearing action eliminates need for high pressure to accomplish the desired dispersion. The material is discharged down the spillway and through the outlet.



Cutaway view showing inside of mill

Mills are jacketed for heating or cooling during operation to permit temperature regulation. Operation is simple due to lack of complicated mechanisms.

Mixers

High-speed mixers employing the colloid mill principle of rotor and stator, are used in mixing operations where the continuous single pass treatment is not essential. Solids may be kept suspended in a liquid. The immiscible liquids may be kept from separating by continuous circulation, and viscous emulsions may be mixed or diluted with water or solvents, or for premix preliminary to colloid mill treatment. 821

Illustrations courtesy of Premier Mill Corporation

Oil-free Orange Juice

Oil from the peel has been one of the things that has caused plenty of trouble for citrus canning firms turning out canned orange juice. Not only did its presence hasten deterioration of the product, but it added an off-flavor which made the product distasteful to most consumers. A Florida cannery now has devised equipment for extracting this peel oil, and believes it has entirely licked the problem.

The general practice of packers was to loosen the reaming equipment so as to prevent extraction of much of the oil when the juice was pressed from the oranges. The drawback to this method was that a lot of juice was wasted. With the new de-oiler unit this Florida canner is enabled to tighten down his reamers, and only 2% is lost when the extracted juice passes through the de-oiler.

The de-oiler works on the same principle as a cream separator, removing the oil centrifugally. It was designed originally because of the need for a relatively oil-free orange juice for making citrus concentrate. It worked so well on the concentrate that the packer is using it on his "single strength" orange juice. A sizeable amount is already on the market available to civilian consumers. 824

Citrus Pulp Waste

Two new by-products from citrus pulp waste of citrus canneries are envisioned by one Florida packer—ascorbic acid and edible yeast. Pilot plant operation to extract ascorbic acid was run during the last packing season, and a full scale plant will be in operation to turn it out during the 1944-45 season. A pilot plant will operate next season to turn out the edible yeast which will be used in stock feeds. The yeast will be manufactured from the waste water in the cannery.

The cannery which will manufacture these two new products already turns out a number of by-products from its waste citrus peel. It manufactures essential oils, a citrus molasses and citrus pulp stock feed that has found a ready market for cattle feeding in Florida. 825

Healthy Skin Naturally Antiseptic

Healthy skin has a natural antiseptic action toward many bacteria. Dirty skin, by contrast, shows a sharp reduction in destructive action against bacteria. Moist areas suffer a decline in their sterilizing power. When the skin becomes dry the number of bacteria decrease. A soap with a good lather destroys diphtheria bacilli, streptococci, pneumococci, meningococci, gonococci, influenza bacilli and Eroponema pallidum. The alkalinity of the soap is not responsible for the bactericidal action, this being due rather to the undissociated fatty acid molecule. 826

Packing Cream-style Corn

A new method of packing cream-style corn without the use of commercial cornstarch has been developed by a large midwestern cannery firm. It involves the use of special disintegrating equipment to make a high starch cream from mature corn which is added to the cream-style pack to bring it to proper consistence. 822

Clay Soil Paint Pigment

A paint pigment has been prepared from the clay soils of Puerto Rico. After treatment for 6-8 hours the resulting compound gave a paint ready for use on thinning with linseed oil. Preliminary tests indicated that this paint would be satisfactory as a general outside paint for roofs, barns, boats and machinery. 823

NATIONAL CAN

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Small Insecticide Dispensers

Small aerosol insecticide dispensers—miniature metal cylinders about two inches long, carrying one-shot doses of insect gas for spraying small confined areas, may be put on the market after the war. They would be similar in design and appearance to the small carbon dioxide cylinders sold for home preparation of carbonated waters, and would be convenient for taking along on week-end trips to provide protection from insects. 827

Dental Coating

A protective coating, of interest in dental preparations as a means of treating ailments of the oral cavity, offers possibilities to manufacturers of tooth pastes, etc., and other dental preparations. The method concerns itself with the use of a protective coating material formed by combining in a solid edible matrix such as sugar particles or a pectous substance such as pectin or a pectate or pectinate, dispersed throughout the mass. The matrix will dissolve slowly in the mouth, gradually exposing the pectous particles which, as they come to the surface, form a coating. 828

Frozen Concentrated Milk

A new method for manufacturing frozen concentrated milk is being investigated by the armed forces as a possible source of fluid milk for hospital ships. The product may be one that has commercial postwar possibilities for the domestic consumer market. Developed by research workers at a state college, the new product is said to be superior to evaporated milk. Taste tests indicate that the product, when reconstituted, can hardly be distinguished from fresh milk. It can be defrosted by putting the frozen blocks directly into hot water. By using an equal amount of water, a product resembling coffee cream is produced. Twice as much water is added for beverage purposes. 829

Mechanical Corn Pickers

Corn canners soon may be owning mechanical corn pickers to lend to their growers for harvesting cannery sweet corn. Enough experimenting has been done already so that it is known that the machines will work satisfactorily. Experiments were made by one large canning concern last season to learn what adjustments needed to be made to the conventional style of corn picker which is used to harvest mature field corn. This season, a dozen of the pickers worked successfully on white corn and the taller growing strains of yellow corn.

It is reported that one man, driving a tractor-mounted picker, can harvest 10 to 12 acres per day of white corn running around three and a half tons to the acre. This is equivalent to the labor of eight or nine men picking by hand. 830

Technical Topics

CHOCOLATE TREATMENT—The old chocolate conche, with its huge bed and heavy stone roller, took from 72 to 120 hours to grind, aerate and blend the cocoa, cocoa butter and sugar into a smooth paste. Through a careful study of the various functions of this cumbersome old apparatus a machine has now been designed which accomplishes all the desired results in from 8 to 24 hours. It is even claimed that the chocolate paste produced on the new equipment is better than that of the old conche in labor and in simplicity. 831

CERAMIC COMPOSITION—Electrically conductive coatings of a ceramic type composition can now be used on a wide variety of non-conductors including glass, plastics, porcelain, soapstone, wood, cloth and paper. Different formulations of the material are being produced to meet varying requirements of different base materials and degrees of adherence and film toughness. Coatings are dull, metallic gray in appearance. 832

SHOE COATING—Shoes coated with a solution of vinyl resin are reported to protect the wearer against allergy, dermatitis and folliculitis caused by oils and solvents. The solution is said to be impervious to sulphur-base cutting oils, kerosene, paint, lacquer, cleaning and degreasing compounds and other organic solvents and leave the leather flexible. It will protect and greatly extend the life of shoes. 833

LARVAE CONTROL TESTS—Toxicity tests of phenothiazin insecticidal sprays and dusts for control of larvae of the codling moth showed that the addition of bentonite or slaked lime decreased the effectiveness. 834

WATER SOFTENER—Sodium alginate is advanced as a water softener and remover of boiler scale. These properties are attributed to the fact that, combined with calcium, it forms an insoluble globular mass which envelops other precipitates and sediment to give a soft, pasty sludge that is removable by regular blowdown or swilling. 835

INSECT REPELLENT—Dimethyl phthalate has been found far superior to Citronella and other preparations as an insect repellent. Now on allocation, it will be a great advance in repelling mosquitos, fleas, flies, gnats and chiggers. 836

MOSQUITO LARVAE KILLER—Paris green (copper aceto-arsenate) has been found so toxic to mosquito larvae that less than one ten-millionth of a grain can destroy a larva. This new application is being widely used in the South Pacific and in Italy. 837

SILVER STERILIZES WATER—Interesting results in the use of silver for sterilization of potable water have been found by the Indian Tea Association. This process has been in use at 40 labor camps in India. No taint is imparted to the water. In this respect it is superior to chlorination and continual tests show satisfactory bacterial control. 838

POLYTHENE—Polythene plastic applied by the flame-spraying of metals method is tough and highly impermeable, and when applied over metal surfaces provides a high degree of protection against brines, chemicals, and other corrosive agents. 839

PRESERVATION OF DESICCATED BLOOD-GROUPING SERA—The preservation of desiccated blood grouping sera has been effected by diluting with such dried powdered substances as sucrose, dextrose, sodium chloride, or other non-hygroscopic salts which do not affect agglutination. 840

RESINOIDS—Natural extractions such as resinoids from storax, Peru balsam, benzoin and oakmoss are necessary as fixatives and aromatics in the use of lavender odors in all powders for the cosmetic industry. 841

CHEMICAL GERMICIDES FOR RINSING DISHES—A laboratory method for the evaluation of the efficiency of chemical germicides used for rinsing hand-washed dishes is in process of development. After sufficient progress has been made with this method, it is hoped to extend the project to the field of machine-washed dishes. 842

REPELS JAPANESE BEETLES—A satisfactory repellent for Japanese beetles consists of Bordeaux mixture (4-4-50) with lead arsenate. 843

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corporation, 110 East 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

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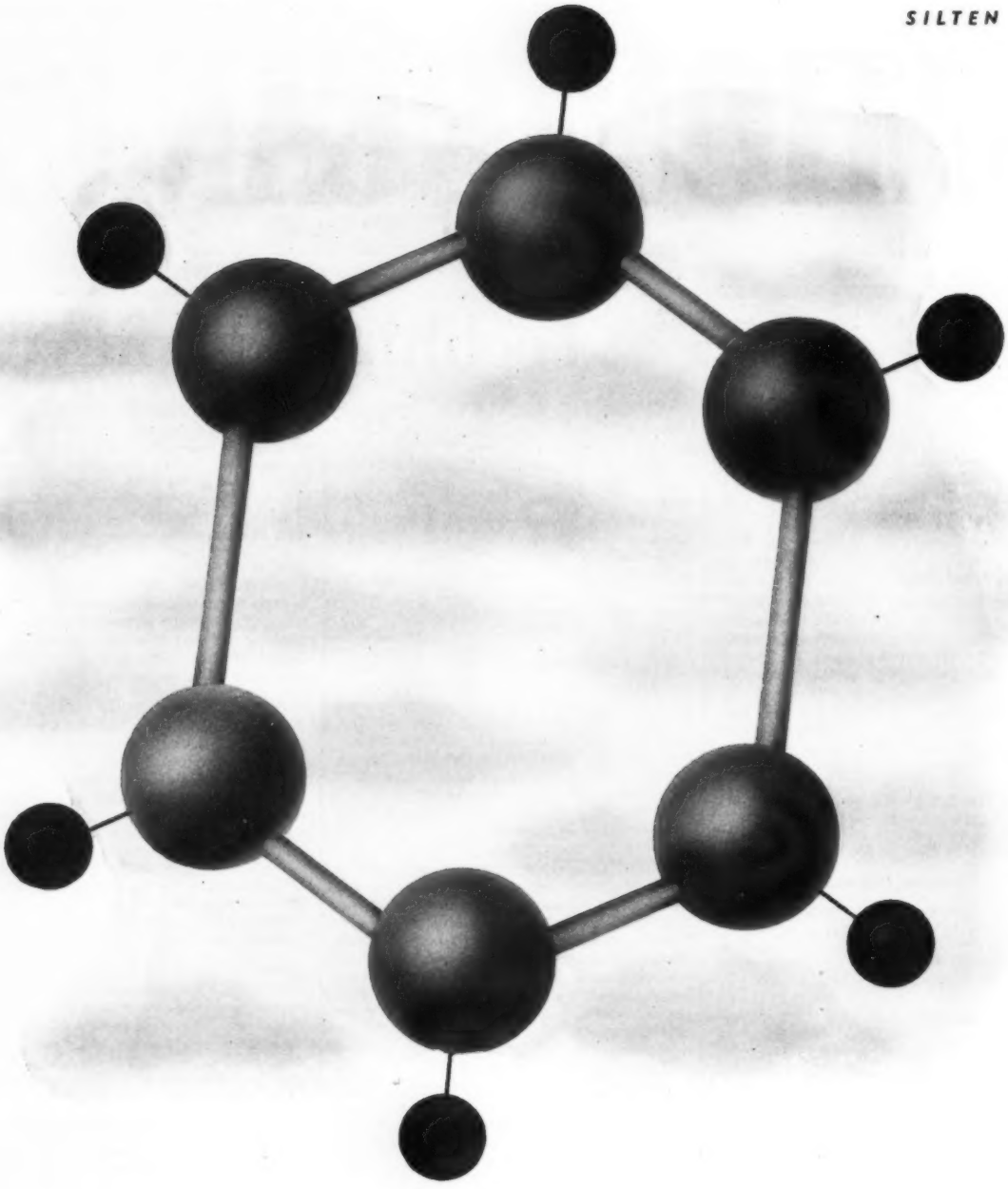

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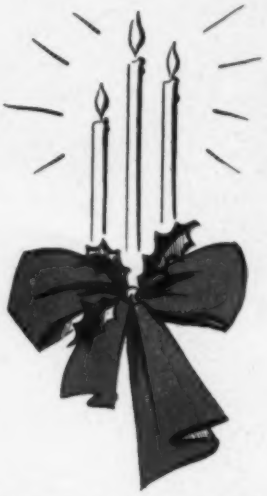

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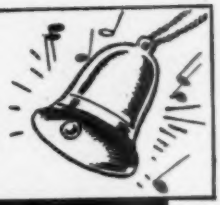

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SCIENTIFIC PACKAGING

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Speed the Victory with War Bonds

We invite you to consult us regarding your manufacturing problems and requirements.

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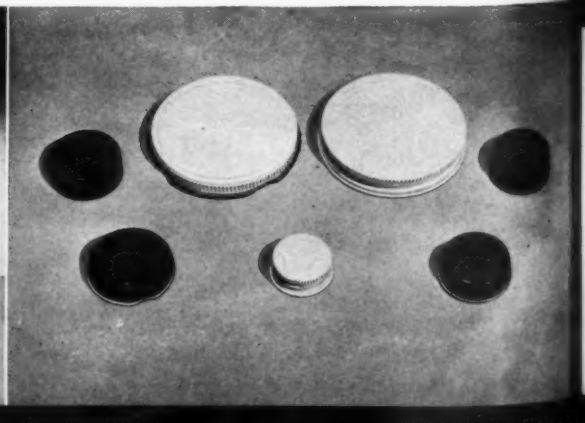
THE ANCHOR HOCKING GLASS PACKAGE COMPLETELY RECONCILES ALL THE DIVERSE DEMANDS OF EXECUTIVES, DEPARTMENT HEADS AND SALES FORCE

Policy executives want a package which protects products from deterioration, spoilage and loss of virtues until consumed, thus assuring consumer satisfaction and eliminating complaints and returns. Treasurers and purchasing agents are interested in initial and production costs, and in the long-run economy of having the right package for the job. Production heads want packages accurate in capacity and finish, resistant to shocks of high-speed operations, and economical on labor costs through ease and speed of handling. They also prefer a supplier able and willing to lend expert technical and research assistance when needed. Chemists demand an airtight, leakproof, moisture-proof package, impervious to the chemical action of the product itself, and offering full protection until the product is consumed. Sales and advertising men want a package which invites product inspection, recognition and acceptance, and meets the consumer's preference for easy opening and resealing.

From all these points of view, an Anchor Hocking glass container, sealed with the correct type of Anchor metal or plastic cap for an airtight, leakproof, moisture-proof seal, forms the ideal package for your products.



WILL THE GLASS PACKAGE YOU RECOMMEND SATISFY THE DIVERSE REQUIREMENTS OF THIS GROUP, MR. HIGBEE?
FROM ALL POINTS OF VIEW, ANCHOR HOCKING GLASS PACKAGES SATISFY

A. V. HIGBEE, one of Anchor Hocking's ablest and most popular men, has been a member of the Anchor Hocking family for 25 years.

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a single versatile material to do several jobs for you

Among the reasons for the rapidly increasing use of Dow Propylene Glycol, N. F., in the pharmaceutical and cosmetic industries is its ability to do *more than one job at the same time.* This new Dow product will serve your individual requirements in many ways:

Solvent	Emollient
Humectant	Penetrant
Softening Agent	Carrier
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But more than this, it will also serve to answer a *combination of these requirements.* For example, Dow Propylene Glycol, N. F. used as a humectant in cream or ointment formulations will likewise act as a softening agent, plasticizer, emollient, spreader and penetrant. This multiple-duty feature means real economy, and often results in product improvement as well.

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used in making cleansing creams, astringents, pomades and many other products.

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an important ingredient of salves, ointments, suppositories and many other preparations.

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Penn-Drake Petrolatum is refined from the finest Pennsylvania crude, through a carefully controlled process that provides correct viscosity for the individual product, maintains desirable resistance to oxidation, eliminates undesirable taste or odor and assures smooth blending qualities.

Valuable information on how Penn-Drake Petrolatums improve the quality of your product supplied on request. Write today.

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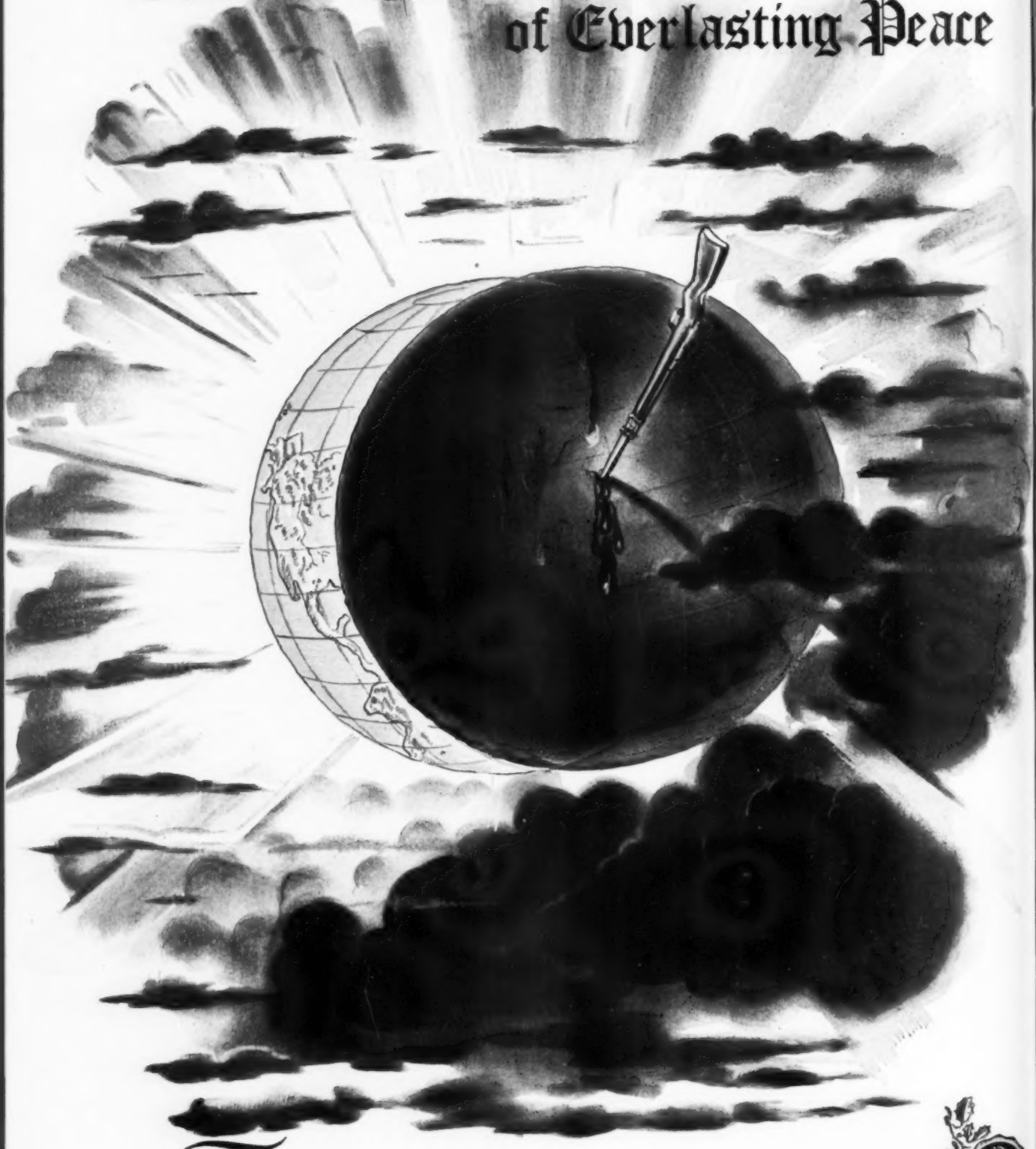

Florasynth LABORATORIES, INC.

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AN UNSOLVED DISPERSION OR EMULSION PROBLEM?

Our specialty is to help solve product problems, the answer to which you may not have found to date. Intense specialization on emulsions, dispersing and surface active materials has given us a "knack" which often breaks a bottleneck in production or sales promotion.

Our type of service is exemplified by the following: The consultant for a large cosmetic house came to us with a seemingly impossible problem. The client wanted a product altered so as to permit of different and novel packaging and an entirely new sales promotion angle. The very nature of the change called for was antagonistic to the known and accepted standards of behavior of the composition involved. We made available two custom built, surface active materials developed according to the consultant's specifications and worked with him on their successful application. This made it possible for that manufacturer to write up $25,000 worth of orders in two days from hastily and incompletely packaged samples. Furthermore, we believe our cooperation has given his product a competitive edge in quality and sales presentation to the consuming public.

We can't promise to do as well for you but do promise to give your unsolved product problems conscientious and thorough study so as to help you achieve your objective. No obligation is involved in taking advantage of this service.

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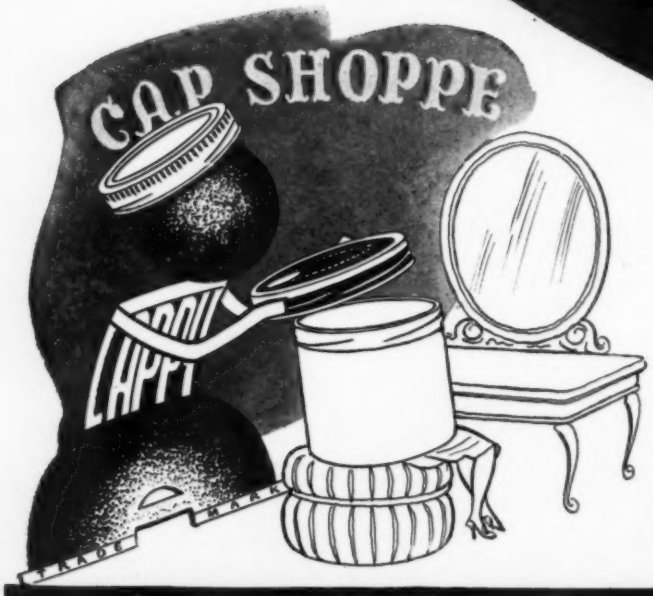
SPECIALISTS IN CUSTOM BUILT EMULSIFIERS, DISPERSING AND SURFACE ACTIVE AGENTS



"Eye-Dealizing" DONE HERE

Is your package a credit to its contents like these attractive Aridor-Capped House of Lowell jars? Or, are you underdressing your glamor-aid in a container topped with a prosaic run-of-the-mine Cap which doesn't do its proper job of expressing the quality and individuality of your product? Aridor, specializing in "Eye-Dealized" designs for lithographed Caps, can help your package dress the part. If your present Cap is a Cinderella, send us your package now. Our recommendation will cost you nothing.

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They call it the Shakespearean or Hamlet's Soliloquy test at Martin Laboratories.

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So far every Tube B has matched Tube A, but the checking continues with every new batch.

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Martin's depilatory powders are absolutely odorless—and absolutely safe. Simply add water and apply. No trace of hair in four minutes. They may be used with full confidence on hands, legs or face.

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These glycols

- Are chemically stable
- Have a broad range of hygroscopicities
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- . . . and are available in consistencies ranging from liquids to waxy solids resembling petrolatum or paraffin.

● At their new lower prices, "Carbowax" Compounds—solid polyethylene glycols—and liquid Polyethylene Glycols should be even more popular as lubricants, binders, plasticizers, or thickening agents . . . applications where they are often superior to many natural oils, gums, and waxes ordinarily used.

Chemically, Polyethylene Glycols can be modified by reacting the hydroxyl groups to form surface-active compounds useful as detergents, and emulsifying agents, or unusual alkyd resins.

The "Carbowax" Compounds are solids supplied in five different molecular weights ranging from 1000 to several thousand. The liquid Polyethylene Glycols are available in four molecular weights from 200 to 600. Almost any desired consistency can be obtained by blending them.

Write for further information on the physical properties, uses, and new lower prices of the Polyethylene Glycols and "Carbowax" Compounds.

Some Commercial Applications of Polyethylene Glycols and "CARBOWAX" Compounds

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Color binder and vehicle, mold lubricant, modifier for cements and plaster.

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Binders, carriers, and spreaders for plant hormones, fertilizers, larvicides, and insecticides.

Leather
Polishes; cleaners; dye penetrant; dressing agent.

Metal
Extrusion and drawing lubricants.

Paper
Coating, softening, and sizing agents; plasticizer for zein coatings.

Pharmaceuticals
Carrier and solvent for hormone, sulfa drug, peroxide, and other ointments.

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Film lubricant.

Polishes
Lubricant and film-former; spreading agent.

Pigments and Paints
Carrier and dispersing agent.

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Mold lubricants; compounding wax; activator for mercapto-type accelerators.

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Lubricant: dispersant for dyes; finishing agent; sizing compounds; detergent intermediate.

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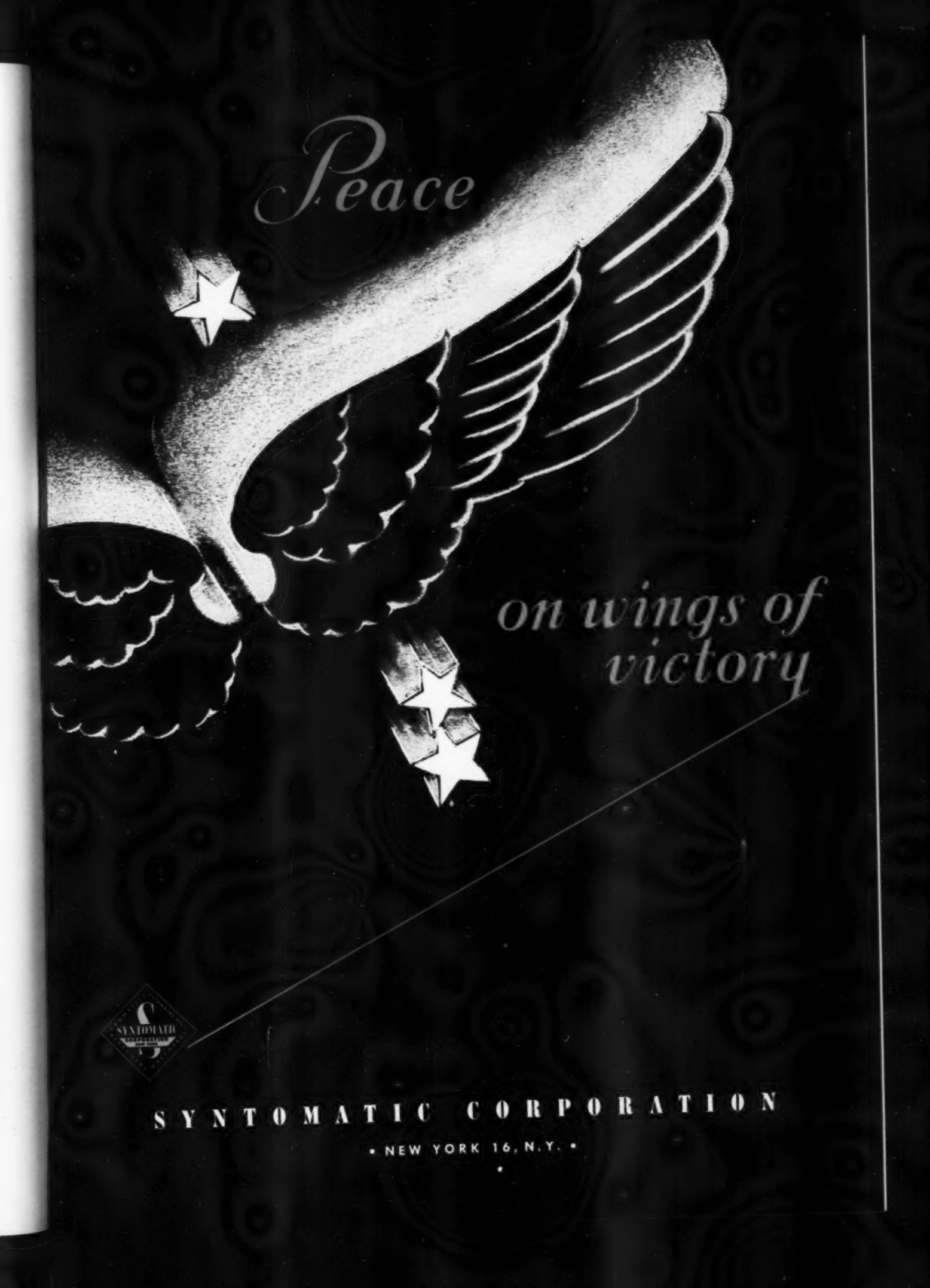
"Carbowax" is a registered trade-mark of Carbide and Carbon Chemicals Corporation.
The term "Polyethylene Glycols" refers to those Polyethylene Glycols higher than triethylene glycol.



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A truly remarkable synthetic version of the natural Parma-Violet note!

This Chuit, Naef specialty embraces all the most desirable characteristics of the ideal Violet basic note. It is non-irritating—*contains no methyl heptine carbonate*—very fresh and tremendously powerful.

PARMANTHEME can be used in any type toilet preparation, being particularly effective in lipsticks, creams and perfume extracts.

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Kolmar Laboratories express sincere appreciation and thanks to our many customer friends for their loyal patronage. We are grateful for this constant association and the opportunity to serve which have helped Kolmar grow throughout the years and achieve high standards in both quality products and sound business practices.

Today Kolmar is a leader in the cosmetic industry...creators and manufacturers of fine private label cosmetics.

Kolmar representatives and all the 500 employees join in saying, "Happy Holidays and Best Wishes for a Successful New Year."

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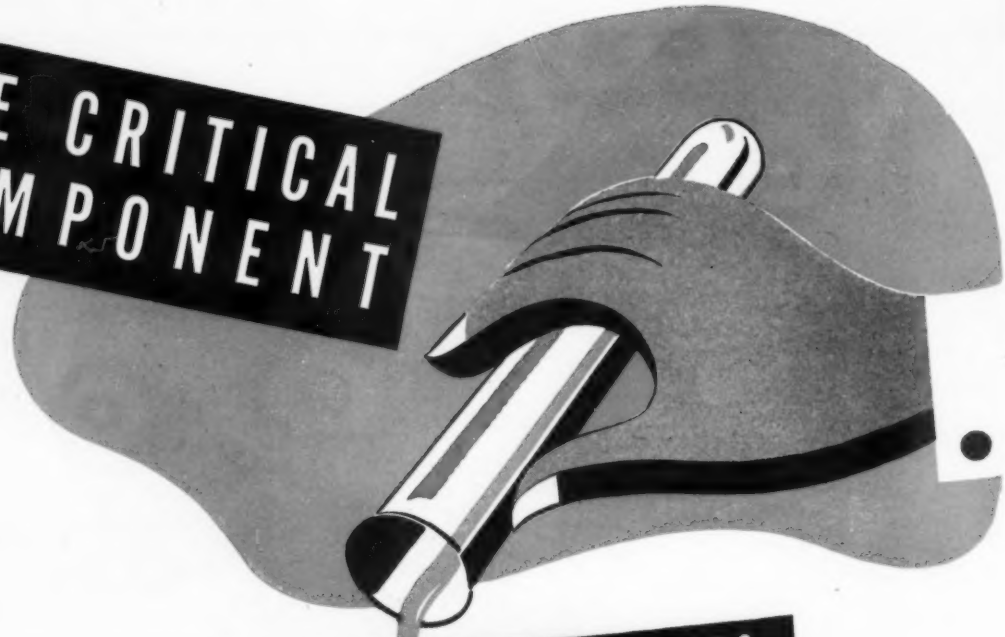


LIQUID AND SOLID FATTY ACIDS

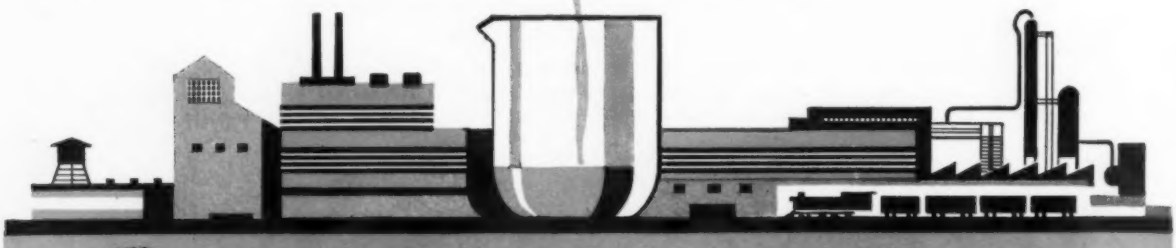
Each component of a chemical process is manifestly a critical one. This is axiomatic. Yet, in every process, there is one component that is more critical than any other in its effect on the finished product. This might be the material, or it might be the skill and experience of the manufacturer producing it.

You, the manufacturer of a drug or cosmetic preparation, examine your sources of supply because their components affect the quality and efficiency of your output. In the cases of red oils (oleic acids) or solid fatty acids (stearic acid, for example) used in the preparation of soaps, creams, polishes, pharmaceutical emulsions including insecticides, etc., you can look to Emery for advancements.

One of the newer developments of our research is a unique method of separating fatty acids into their solid and liquid fractions. Certain of these are high in stearic acid, C_{18}, and others are high in Palmitic Acid (C_{16}). Their titre range, high degree of shrinkage, and general physical and chemical characteristics mark them as unusual among solid fatty acids.

Emery's oleic acids (red oils) are produced over a wide range of titre and color . . . each grade refined for a specific type of use. For example, Emery's 0-131 Special Olive Elaine is an extremely pure distilled oleic acid, almost colorless. It is recommended for those liquid soaps whose exacting specifications demand a superior raw material.

Emery's stearic and oleic acids are made in so many grades and fractions that general recommendations are meaningless. However, if you will let us know just what your exact requirements are, we can recommend the most suitable and economical fatty acid for that use . . . and we'll be glad to send you an adequate sample, too.



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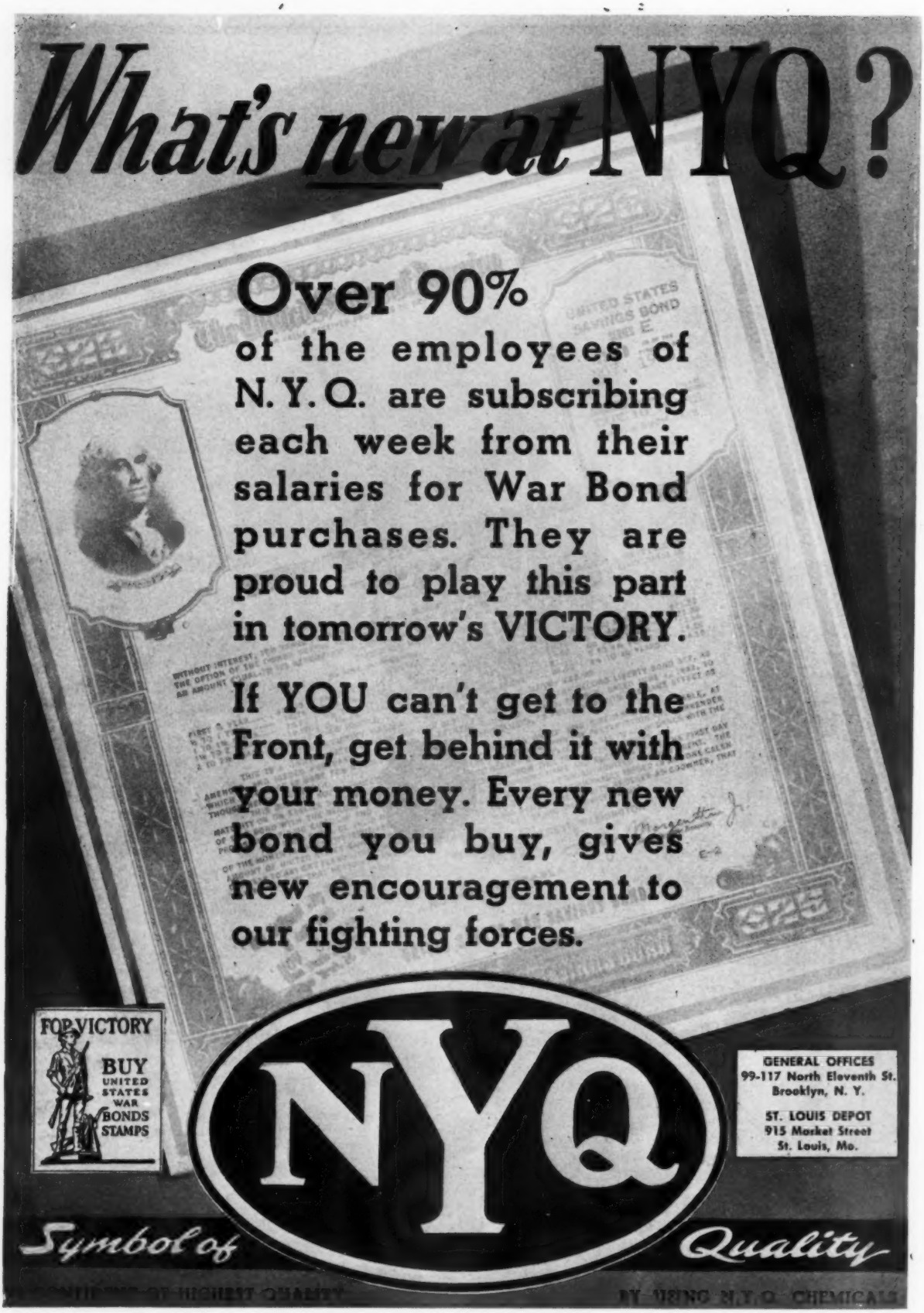

Over 90%
of the employees of N.Y.Q. are subscribing each week from their salaries for War Bond purchases. They are proud to play this part in tomorrow's VICTORY.

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BY USING N.Y.Q. CHEMICALS

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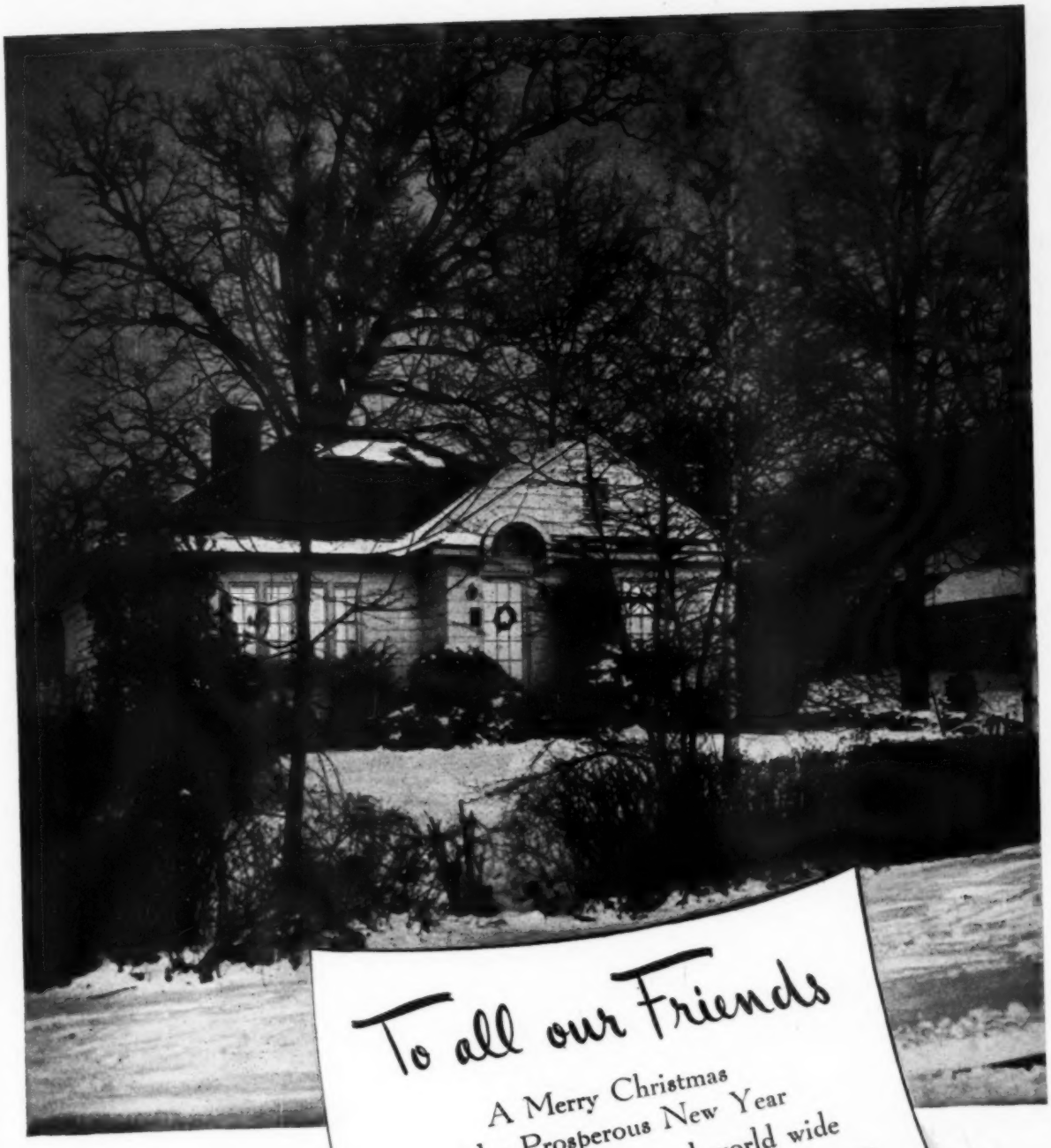

To all our Friends

A Merry Christmas
and a Prosperous New Year
. . . with early peace and world wide
good will among men

HEYDEN CHEMICAL CORPORATION

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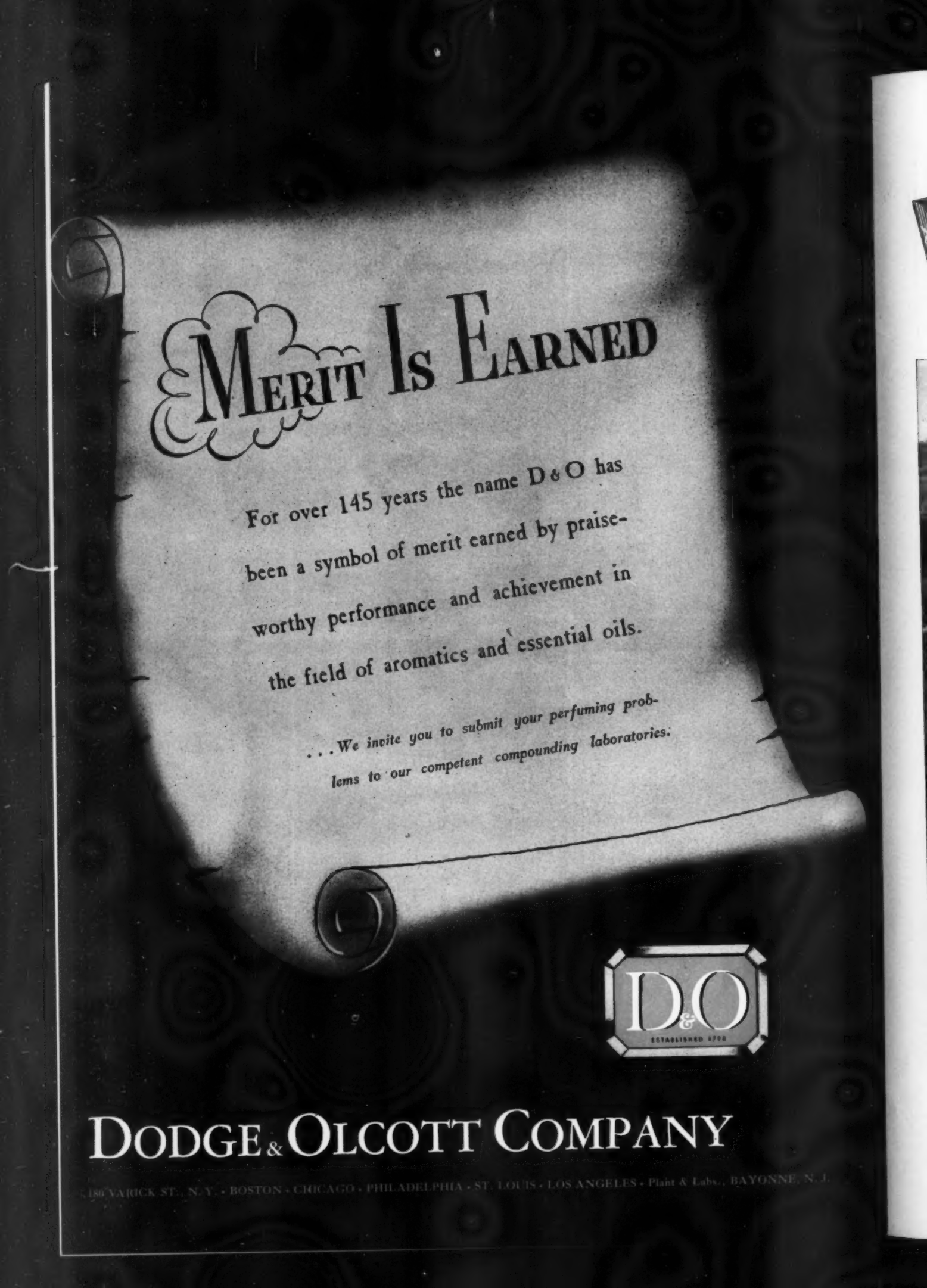
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LET US SHARE OUR TOMORROW

with those who have learned to share in the midst of war!

Acme Photo

IN SOME place of honor in your place of business, there is a Scroll of Honor. It bears the names of those who have left the production line for the front line.

Those boys have learned to fight and kill and die . . . but they have learned to share, too . . . to share even little things like a letter or a package from home with their buddies, or precious candy rations with half-starved natives.

Now it's up to us to see that we share with them the bright tomorrow they are earning for all of us today.

It's up to us to plan jobs now, *better* jobs, for those who come home.

God willing, may that day come soon,

★ ★ ★

This Message is Published by

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IN THE INTEREST OF ALL WHO ARE FIGHTING TO MAKE PEACE ON EARTH A REALITY

MASSAGE OILS

BURN TREATMENTS

OINTMENTS

TOOTH PASTES

QUALITY PHARMACEUTICALS

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White Oils and Petrolatums

Leading pharmaceutical manufacturers have long standardized on SONNEBORN White Oils and Petrolatums . . . convincing evidence of the unsurpassed Quality, Purity and Stability of these highly refined ingredients.

A few of the end-uses of successful products containing SONNEBORN White Oils or Petrolatums are illustrated. There are many others.

The broad research facilities of the SONNEBORN laboratories, backed by 64 years of refining experience, are available for aid in current production problems and in the development of new pharmaceuticals for postwar markets.

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TYPE I: *Medium Consistency—White Protopet—Yellow Protopet and other colors*

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DEO-BASE— Light hydrocarbon distillate refined to complete freedom from kerosene odor.

TRI-OL— Base for soapless oil shampoos and base for soap-sensitive skin cleansers.

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Lavender Concrete Extra

Contributes the fresh natural note to your fine Lavender and Fougere compositions.

It is particularly valuable for soap and shaving cream perfume bases.

A sample will be sent promptly upon request!

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HOOKER CHEMICALS

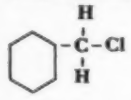
Where You Want the Benzyl, Benzal or Benzoyl Group, Choose from these Hooker Intermediates

Purity, chemical activity, ease of handling and comparative costs are some of the factors which should influence the choice of a chemical intermediate.

Where you need to incorporate a benzyl, benzal or benzoyl group into your product, Hooker gives you an opportunity of balancing these factors against chemical characteristics from a number of intermediates. Among Hooker chlortoluene compounds and derivatives, there are two chemicals that provide the benzyl group: one—the benzal group and four—the benzoyl group. From them we can help you select the one which best meets your requirements on all counts.

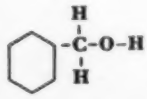
For the Benzyl Group ($C_6H_5CH_2$)–

BENZYL CHLORIDE, $C_6H_5CH_2Cl$



May be used in Friedel-Crafts reactions, may be reacted with alcohols in presence of caustic soda to produce mixed ethers; to introduce benzyl group in amino compounds; will react with sodium cyanide to form benzyl cyanide or phenyl acetonitrile; reacts with sodium sulfhydrate to form benzyl mercaptan; reacts with sodium sulfide to form benzyl sulfide. Produces esters with sodium salts of acids.

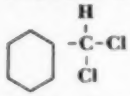
BENZYL ALCOHOL, $C_6H_5CH_2OH$



Reacts with some alcohols in presence of dehydrating agent such as sulfuric acid to produce ethers. Produces esters with acids, acid anhydrides or acid chlorides. Reacts with acetyl chloride to produce benzyl acetate.

For the Benzal Group (C_6H_5CH)=

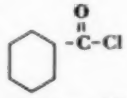
BENZAL CHLORIDE, $C_6H_5CH\,Cl_2$



Reacts with water to form benzaldehyde. May be used in Friedel-Crafts reactions as source of chloro group in production of triphenyl methane derivatives.

For the Benzoyl Group (C_6H_5CO)–

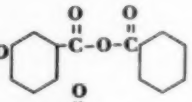
BENZOYL CHLORIDE, C_6H_5COCl



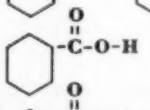
May be reacted with alcohols to produce esters. May be used in Friedel-Crafts reactions to produce ketones. Reacts with ammonia to form benzamide. Reacts with amines to give benzoyl substituted products.

Benzoyl Chloride is the most reactive chemical of the Hooker Benzoyl compounds. However, the following are also sources for the Benzoyl Group, and may be preferable in some cases:

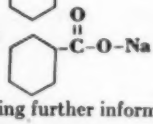
BENZOIC ANHYDRIDE, $(C_6H_5CO)_2O$



BENZOIC ACID, C_6H_5COOH



BENZOATE OF SODA, C_6H_5COONa



When requesting Bulletin 320, containing further information on these Hooker chemicals, please write on your letterhead.

HOOKER ELECTROCHEMICAL COMPANY

13 Forty-Seventh St., Niagara Falls, New York

NEW YORK, N. Y. • TACOMA, WASH. • WILMINGTON, CALIF.

CAUSTIC SODA CHLORINE

PARADICHLORBENZENE MURIATIC ACID

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Sincere Christmas Greetings

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• HELFRICH LABORATORIES OF N. Y., INC., 151-163 WEST 26TH ST., NEW YORK • CABLE ADDRESS: HELFLABS, NEW YORK . . . CHICAGO . . . TORONTO

HELFRICH Laboratories

With hope in our hearts — with a prayer of gratitude on our lips in humble appreciation for the valiant effort and unequal sacrifice of those who bear the scars of battle — we repeat the old, yet ever new, expression of friendship and goodwill. May the New Year bring lasting peace and encouragement for all.

H·KOHNSTAMM ESTABLISHED 1851 & COMPANY, INC.

• 89 PARK PLACE, NEW YORK-7
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• 4735 DISTRICT BLVD., LOS ANGELES-11

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KANSAS CITY, MO. • MINNEAPOLIS • NEW ORLEANS • OMAHA • PHILADELPHIA • PITTSBURGH • ST. LOUIS • SAN FRANCISCO

LITTLE THINGS THAT COUNT

Yes . . . there's *nothing* more important to a woman than her cosmetics. *That's* why we take pride in our products, which is reflected in their quality uniformity.

For post-war, our consistent research *already* assures cosmetics and specialties that will set even *higher* standards *tomorrow.*

NOW is the time to plan for the future of *your* brand; consult us!

PARIS COSMETICS, *Inc.*

Private Label Cosmetics Exclusively

FURLAGER MFG. CO., *Inc.*

Powder Puffs and Perfumers Specialties

116 WEST 14th STREET, NEW YORK 11

Emulsifiers

OF QUALITY AND UNIFORMITY

NOW READILY AVAILABLE

FOR SOAPLESS, NEUTRAL AND ACID EMULSIONS

TEGIN — Glyceryl Monostearate—Self emulsifying. For neutral greaseless creams, lotions and ointments.

TEGACID—Glyceryl Monostearate—Acid emulsifying. For greaseless anti-perspirant creams and ointments.

TEGIN P — Propylene Glycol Monostearate — Self emulsifying. For brushless shave creams, greaseless creams, lotions, ointments and cosmetic stockings.

TEGIN 515 — Glyceryl Monostearate — Non-emulsifying.

TEGO STEARATE
— For greaseless creams, lotions and ointments.

•

PRESERVATIVES *Esters of Parahydroxybenzoic Acid*
TEGOSEPT E TEGOSEPT M TEGOSEPT P BENZYL TEGOSEPT BUTYL TEGOSEPT

LANOLIN ABSORPTION BASES
PROTEGIN X—*For Nite Creams and Ointments.*
ISO-LAN—*For Creams, Lotions and Ointments.*

GOLDSCHMIDT
CHEMICAL CORPORATION

153 WAVERLY PLACE, NEW YORK 14, N. Y.

SALES REPRESENTATIVES

MONTREAL BOSTON LOS ANGELES CHICAGO ST. LOUIS TORONTO

B_1 IS OFF ALLOCATION!

Now vitamin B_1 as well as B_2 can be shipped in any quantity, for immediate delivery at any time, with *no* allocation worry of any kind.

The War Production Board's announcement of October 21 dropping vitamin B_1 (thiamine hydrochloride) from allocation, follows recent similar action on B_2 (riboflavin) and means that once more—for the first time in many months—all customers, likewise all who have been holding off regular use of these vitamins because of restrictions, can go "full speed ahead" and be sure of adequate supplies for every desired purpose.

As a world's leading maker of these vitamins, we were naturally looked to for huge increases in production. But this would not have been possible without the untiring efforts of the men and many women who have kept our manufacturing units operating day and night, turning out Vitamins By The Tons for America and her allies. Like the rest of our 1600 employees who have maintained the heavy flow of Roche products—vitamins, medicines, penicillin—required for military and civilian health defense, they have done their jobs well.

For latest prices covering any prospective use—or increased use—of vitamins B_1 or B_2—also B_6, C, E, calcium pantothenate, niacin or niacinamide—keep in touch with our Vitamin Division. Whatever quantity you need, *whenever* you order, you can depend on getting finest quality in its most advantageous form if you specify 'Roche.'

HOFFMANN-LA ROCHE, INC.
VITAMIN DIVISION NUTLEY 10, N. J.

FOR PREVENTING INFECTION

...vinegar is a far cry from Calco's famous SULFADIAZINE

MARCH 24, 1855.
THE ILLUSTRATED LONDON NEWS
287
SCUTARI.—Benevolent individuals are respectfully informed that RIMMEL'S VINEGAR has been ordered to be sent to Miss Nightingale, for the use of the sick soldiers at Scutari, as the best means of purifying the air and preventing infection. It is to be had from all Perfumers and Chemists, and from the Inventor, E. RIMMEL, 39, Gerrard-street, Soho. In Bond, for Shipping, at a reduced price.
ECONOMIC

The above advertisement, reproduced on this page, appeared in The Illustrated London News, March 24, 1855.

British troops were then fighting Russians in the Crimea. More Englishmen were dying behind the lines than upon fields of battle. In unsanitary military hospitals infection and disease ran rampant. At Scutari, the heroic Nightingale was engaged in her epic mission of mercy. What a pity that, instead of vinegar as an "antiseptic," Miss Nightingale could not have had the blessing of today's new "Miracle Drug," CALCO'S SULFADIAZINE!

• • •

Everyone knows, how in this war, on and behind every fighting front, SULFADIAZINE has literally performed wonders in alleviating suffering and saving lives.

It has, in this respect, a record never before even closely approached by any other drug. It is conservative to say that, in the comparatively short time since its introduction, SULFADIAZINE has been used in many millions of cases in the armed forces of this and Allied nations.

This, then, is good news with victory approaching fast: CALCO'S large capacity plants are now able to supply this famous SULFADIAZINE in quantity to meet fully any ethical drug manufacturer's current and future expanding needs. Why not let CALCO know of your requirements right away?

Pharmaceutical Department
CALCO CHEMICAL DIVISION
AMERICAN CYANAMID COMPANY
BOUND BROOK — Calco — NEW JERSEY

ARMY E NAVY

When G.I. Joe comes Home

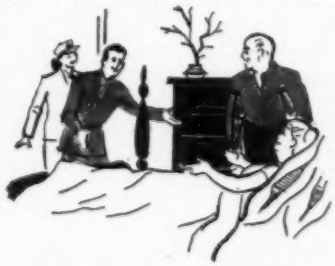
your Red Cross stays at his side

No matter what emergency may arise, G. I. Joe can look to the Red Cross for help. Thousands of appeals from ex-servicemen and their families are being answered every day. The job is big, and *growing*... what can *you* do to help?

J. E. is home, medically discharged. A physical disability prevents returning to his old job. Through vocational training, he learns leather-working and becomes self-supporting.

Mrs. L. T., en route to join her soldier-husband, is suddenly taken sick in a strange city. Immediate hospital care, provided through the Red Cross, probably saved her life.

Although six months have passed since his discharge, R. D. is still unable to hold a job. A Red Cross worker discovers psychiatric care is needed, and sees that he gets it.



Mrs. E. K., whose husband is an invalid, is stricken with a serious illness. The Red Cross arranges to bring home her soldier-son, who keeps the family together and avoids a broken home.

T. H. is home, medically discharged. His pension is delayed. The Red Cross helps him secure necessary proof of his claim, and tides the family over until the first check comes.

Two soldiers' wives arrive at an army camp and find their husbands have been sent abroad. The Red Cross, when informed of their plight, loans them funds to return home.

In these and other ways the Red Cross is helping G. I. Joe. It furnishes financial aid... sends letters, telegrams, cables... arranges for medical care... gives training in arts and skills... lends a helping hand where it is most needed. These services must be continued. Keep them going—by helping through your local Red Cross Chapter.

COMMERCIAL SOLVENTS
Corporation
17 East 42nd Street, New York 17, N. Y.

Oxzyn

SERVES THE TRADE EXCLUSIVELY

WITH QUALITY

LIPSTICKS

CREAM ROUGES

EYEBROW PENCILS

CREAMS

COMPACTS | ROUGE POWDER MAKEUP

EYE SHADOWS

WATERPROOF MASCARAS

FACE POWDERS

WE ALSO MANUFACTURE POWDER PUFFS, VANITY PUFFS, LOOSE SIFTER POWDER DEVICES AND SPECIAL LAMSDOWNE PUFFS

PRODUCTS MADE IN CONFORMITY WITH THE PURE FOOD, DRUG AND COSMETIC ACT
PRODUCTS LIABILITY INSURANCE CARRIED

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NEW JERSEY OFFICE
ONE PLEASANT AVENUE
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MANUFACTURING
Cosmetics of Quality
SINCE 1877
AUXILIARY PLANT • LOWELL, MASS.

CANADIAN OFFICE
54 OSLER AVENUE
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We offer the finest quality...

- ESSENTIAL OILS
- AROMATIC CHEMICALS
- OLEORESINS
- BALSAMS and GUMS

Also a complete line of our Compagnie Duval materials . . . perfume bases and specialties for use in the manufacture of perfumes, soaps, cosmetics, and insecticides, and for industrial applications. Your inquiries and orders are invited.

S. B. PENICK & COMPANY

ESSENTIAL OILS AND AROMATIC CHEMICALS DIVISION

50 Church Street, New York 7, N. Y. Telephone: COrtlandt 7-1970
735 W. Division Street, Chicago 10, Ill. Telephone: MOHawk 5651

Buy War Bonds and Stamps . . . For Victory

Official U. S. Navy Photo

THE *Real* JOB • • •

Here are the boys that are doing the real job

Our job in our own small inconspicuous way is to help keep the home front running as smoothly as possible pending their return.

Products which are available to the perfumer at reasonable prices:

OIL OF BALSAM FIR AMERICAN
METHYL NAPHTHYL KETONE LIQUID
VERATRALDEHYDE
PHENYL ETHYL ALCOHOL
IONONE A. B.
IONONE METHYL
INDOL
PHENYL ACETALDEHYDE DIMETHYL ACETAL
HYDRATROPIC ALDEHYDE
PARA METHYL HYDRATROPIC ALDEHYDE
CINNAMIC ALCOHOL
CYCLAMAL

Also a full line of Aromatic Chemicals used for Perfumes-Soaps-Cosmetics

Requests for samples on your firm's letterhead and further information promptly furnished.

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS

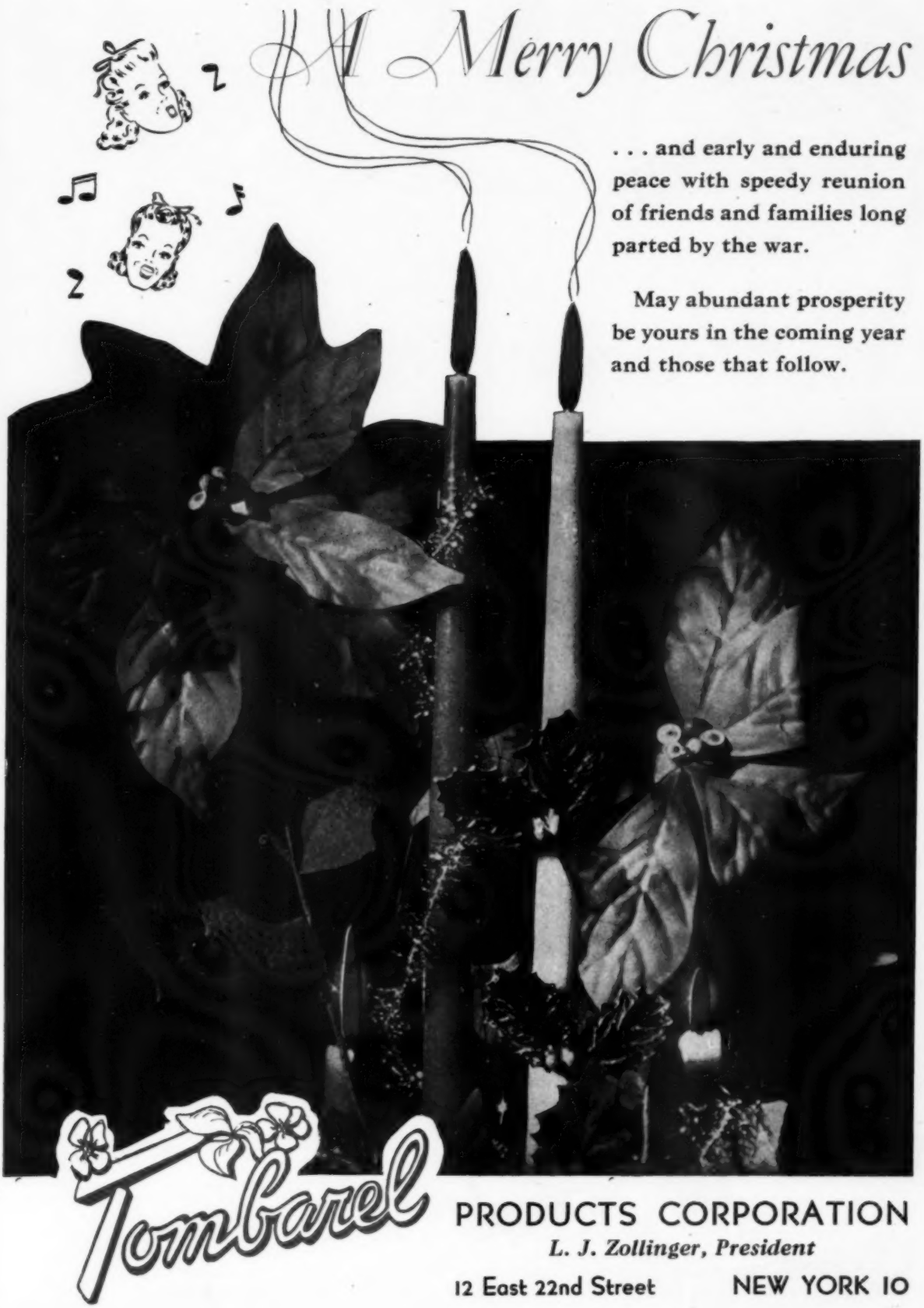
Aromatics Division

GENERAL DRUG COMPANY

644 Pacific St., Brooklyn 17, N. Y.

9 SO. CLINTON ST., CHICAGO 6

1019 ELLIOTT ST. W., WINDSOR, ONT.


A Merry Christmas
. . . and early and enduring peace with speedy reunion of friends and families long parted by the war.
May abundant prosperity be yours in the coming year and those that follow.

Tombarel

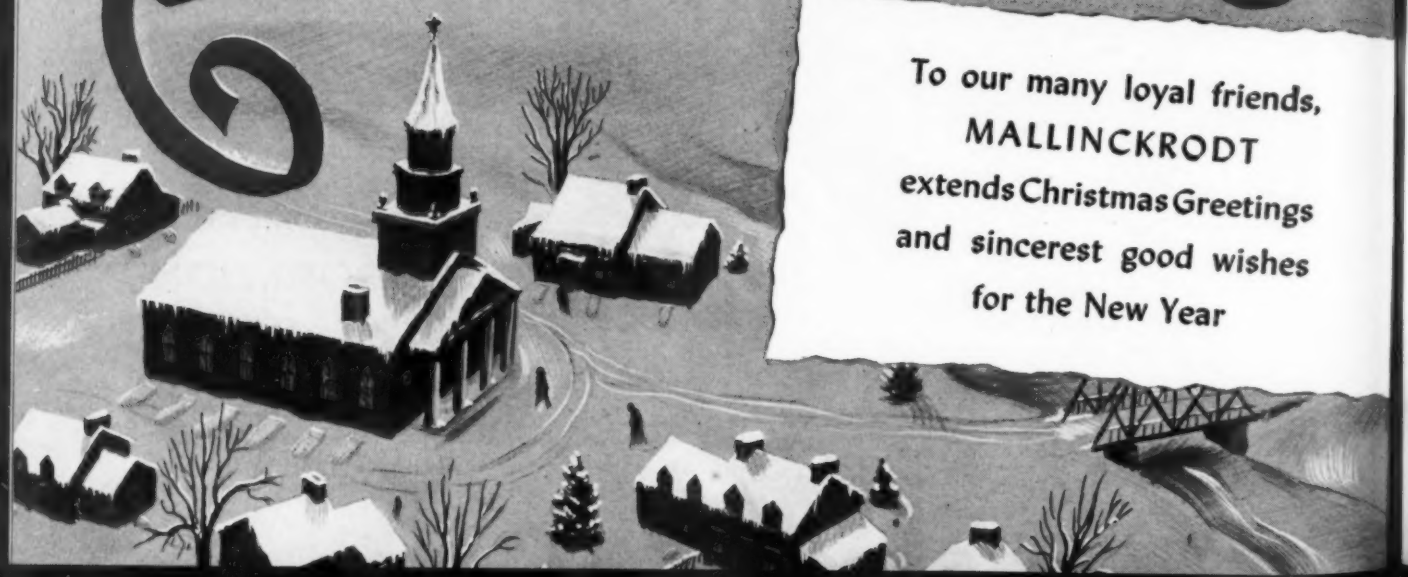
PRODUCTS CORPORATION

L. J. Zollinger, President

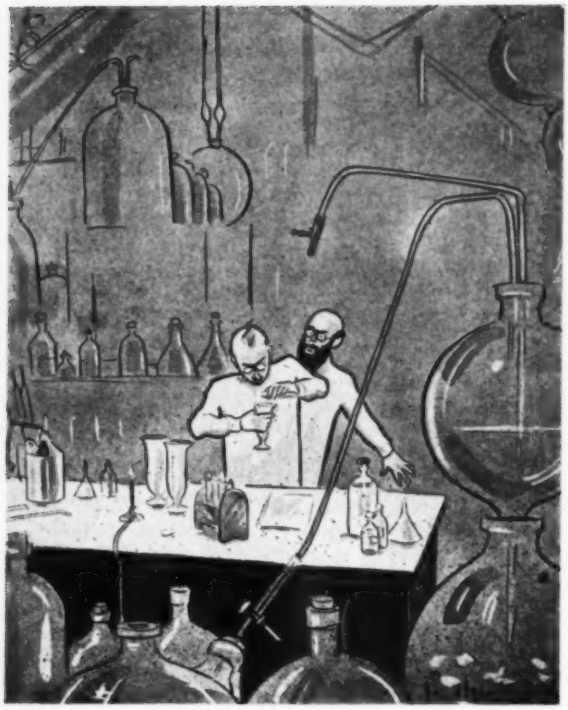
12 East 22nd Street NEW YORK 10

Peace on Earth

Bells will ring again this Christmas Eve in the little churches in all lands throughout the world freed from the iron hand of the invader . . . And in the clear night air, the sound of their pealing, echoing over hedgerow, hill and valley will stir men's hearts with the glorious message of freedom . . . For in almost two thousand years, Christmas Eve has never possessed a greater significance to millions of men and women and children who hope and pray for days of Peace and Good Will among men.



To our many loyal friends,
MALLINCKRODT
extends Christmas Greetings
and sincerest good wishes
for the New Year



"When I told my wife I made a hormone she got the wrong impression."

KEEPING POSTED

Prestige Accounts Attacked

THE Federal Trade Commission has issued a complaint against a manufacturer of clothing linings charging that allowances to buyers merely on the basis of prestige is in violation of the Robinson-Patman Act. Similar conditions might possibly be found among manufacturers of cosmetics. The complaint states in part:

"For the purpose of determining the customers who shall be thus favored or discriminated against, the respondent arbitrarily classifies them on the basis of 'prestige' and on its judgment as to the nature and degree of the 'prestige' such customers enjoy in the coat and suit industries and in the retail distribution of such products. During a single year the respondent has paid to some of such favored customers sums of money ranging from $125 to $4,550 for the advertising of garments lined with 'Earl-Glo' or 'Dutchess' fabrics. The respondent has resisted the extension of payments to some purchasers of its lining fabrics although they were willing to furnish advertising and promotional services, for the reason that such non-favored customers did not come within respondent's classification of 'prestige' customers. As a part of such arrangements, the respondent has spent large sums of money in sharing with the retailers named the cost of advertising coats and suits lined with the respondent's 'Earl-Glo' and 'Dutchess' fabrics."

Here's a case where a manufacturer has sought to promote the sale of his products in the effective manner of working closely with customers whose endorsement is of considerable value, only to have the FTC express the point of view that, even though the arrangement may be of great value, it cannot be measured exactly, and therefore must be disregarded in any legal conclusion of the terms of the Robinson-Patman Act which demands that such cooperation be on "proportionately equal terms."

Greater FDA Activity

WE ARE told that the Food and Drug Administration is now in a position to become increasingly active in the checking of the products that are sold in the domestic market. For the past few years the Administration has been burdened with the inspection of goods going to the Armed Forces, Lend-Lease, and other governmental outlets. As the result of this activity, the amount of attention that could be given to the products being sold in the domestic market was greatly curtailed. However, while the war is not over and large quantities of supplies will continue to flow into these same channels, the stocks for these uses have been built up to very high levels in various parts of the world and replacements will be much less than the amounts required to supply consumption and build stockpiles at the same time.

Increased attention to plant inspection and the condition of botanicals has taken place recently. Botanical inspection has resulted in difficulties for importers and manufacturers for the reason that due to import conditions over recent years large stocks had to be carried, and also due to the fact that the Administration has developed a method of flotation of insect foreign material that is much more sensitive than the method formerly used. The longer that material is stored, even though it is apparently stored under excellent sanitary conditions, the more likely is insect infestation, and even though the material is call cleaned of this material, an inspection of the material six months hence might expose a reinfestation. Perhaps the answer would be to clean the material immediately prior to use.

Another subject in which we are told the Administration is interested is the potency of vitamin preparations. Examination of these products consumes much time and manpower, but we are told that the Administration is getting itself into a position to expand their activity in this direction. It is said that the multi-vitamin preparations by and large have a very short shelf-life due to the fact that vitamin A is very fugitive and also due to the chemical reactions that might occur, about which very little is understood. The likelihood of chemical changes in the multi-vitamin preparations is said to be great when minerals are added to the tablet or capsule. It is said that manufacturers must manufacture their products with a potency higher than that indicated on the label so that by the time they reach the consumer they will not be below the labeled potency.

Drug Export Committee

THE Drug Industry Export Committee, which is composed of members representing the American Drug Manufacturers Association, the American Pharmaceutical Manufacturers Association, and the Proprietary Association of America, recently held its first organization meeting. Members of the committee are: representing the American Drug Manufacturers Association, H. D. Arneson, R. F. Chutter, Leslie Harrop, John Maguire, and Forrest Teel; representing the American Pharmaceutical Manufacturers Association, Lorenzo Arranz, James C. Chilcott, James G. Flanagan, F. Lejarza Saenz, O. Shaw; representing the Proprietary Association, W. L. Bomer, R. M. Dunning, Earl I. McClintock, D. C. Townley, D. A. Walker.

Officers of the committee are: R. M. Dunning, Chairman; F. Lejarza Saenz, vice-chairman; John Maguire, secretary. The executive committee is composed of the three officers and R. F. Chutter, James G. Flanagan, D. C. Townley. The executive committee, consisting of two members from each of the three associations, is authorized to act for the industry committee in all routine and non-controversial matters. Matters of major importance must be submitted to the entire industry committee. Each of the three associations has been requested to name two alternates for attendance at meetings of the committee.

Program in Medical Care

WITH President Roosevelt reelected for another four years, the threat of socialized or state medicine becomes stronger than ever. Practically everyone who comments upon what we may expect within the next four years in the way of national legislation predicts that the Administration has in mind the further development of social security which includes medical care.

The National Physicians Committee for the Extension of Medical Care, which held another conference in New York on November 27, is organized to extend medical care to all people by means other than governmental control. The Committee is seeking to extend medical care by group plans within industrial companies, unions, and other groups, and by means of insurance. The desire of the Committee is to get as many people as possible provided with medical care in some way before the pressure for governmental action becomes too strong.

The problem is not an easy one to solve, and, while the work done so far has been excellent, much more remains to be done. Also it takes time for insurance companies to build up experience so that they know just what their costs are on ordinary risks and finally to determine just how much coverage they can give. Several insurance companies now have policies covering some 2,000,000 people, but they are not ready to extend this coverage any further until they have sufficient experience. However, time is of the essence, and it is up to these companies to move as rapidly as they can if they expect to hold the business they have and expand it at a later date. It is imperative that a very large majority of the people be protected in medical care by some private means before the Government officials put on the pressure for provision of medical care through extension of the social security law.

Learn Spanish Cheaply and Easily

THE Pan American Society, or as it is said in Spanish, the Sociedad Panamericana, Apartado 315, Quito, Ecuador, South America, is offering free a pamphlet which should be very helpful to those in this country who like to be able to understand something about Spanish. It seems, according to M. A. Alvarez, secretary of the Society, that there are more than 300 English and Spanish words that are spelled exactly the same. Simple rules for changing the endings of thousands of English words automatically convert them into Spanish words of similar meaning. Therefore, by means of this pamphlet, it is possible for the average citizen of this country to acquire a rather extensive smattering of the Spanish language with a minimum of study and effort, through learning which English and Spanish words are identical in spelling, and which English words may be readily converted to Spanish by the easy expedient of changing the endings. The free offer holds good for the balance of this year and all of 1945.

More on Salesmen's Unions

A WEEK after the reelection (1944) of President Roosevelt, a sales executive of a large pharmaceutical manufacturing house told us that he would make a prediction. When asked what it was, he said:

"With Roosevelt in office for four more years, the unions will have full sway. And I predict that within two years, the sales forces of all drug and pharmaceutical manufacturers will be organized into unions."

Since that time we have been informed that the salesmen of Winthrop Chemical Company have been organized. With Frederick Stearns already organized, this makes two units of Sterling Drug in the union. Incidently we have been told that one of the demands of the union in their negotiations with Winthrop was that no product could be removed from the Winthrop line of products without the consent of the union, and neither could any new product be added to the line without union consent. We can imagine what will happen to this demand.

We are also informed the union organizers are working hard on the sales staffs of Parke, Davis, and Squibb, and that they claim to have a majority of Upjohn. When a Squibb sales executive was asked how things stood in his company regarding the organization of salesmen, he said: "None of our men will tell us anything and we won't know until the union organizers walk in and inform us that they are in control."

Alcohol Future Bright

ALCOHOL has become easier due to the fact that larger quantities of butadiene for synthetic rubber are now coming from the plants of the petroleum companies. In fact, the present supply and demand pattern indicates the most critical phase of the alcohol program is practically over, according to Walter G. Whitman, assistant director of the Chemicals Bureau of WPB. With another liquor holiday scheduled for the month of January, 1945, WPB has released an additional 2,000,000 gallons of alcohol for non-beverage use as a supplement of the fourth-quarter allocations of industrial alcohol. This alcohol is being released for the

restricted uses which include drugs and pharmaceuticals, tooth cleansing preparations, toiletries and cosmetics, rubbing alcohols, and uses outside this particular industry. The release of this additional alcohol is entirely outside the quotas which manufacturers are allowed to receive. Therefore the alcohol companies are in a position to sell this alcohol to their customers as they choose. Manufacturers therefore are obliged to place orders with their alcohol suppliers and then they will receive as much as the alcohol suppliers can let them have. However, WPB insists that all orders for this alcohol be accompanied by end-use certificates. All of this alcohol must be delivered by December 31, but can be used subsequent to that date.

Revised estimates of the alcohol requirements for the Government in millions of gallons are: Synthetic rubber, 228 in 1945, against 333 in 1944; direct military and Lend-Lease, 98 in 1945, against 90 in 1944; indirect military and civilian, 180 in 1945, against 161.4 in 1944; anti-freeze, 30 in 1945, against 30 in 1944. This means that total Government requirements for 1945 are 536 million gallons, against 614.4 million gallons in 1944, which would leave a surplus production for civilian use of 78.4 million gallons This quantity should be very close to sufficient to supply our ordinary civilian needs of industrial alcohol.

Keep Our War Industries

AS IS the result of every war in which nations are cut off from vital supplies, this war is no exception in causing new industries to be developed in this country. The synthetic rubber industry is a "war baby" just as the dye and organic chemical industry was in the last war. Without the development of the dye and organic chemical industry following the last war by means of a strong protective tariff, we would have been unable to fight the present war at all. Our organic chemical industry not only gave us the materials needed for our explosives, but it also gave us many other vital materials including synthetic organic medicinals among which are the sulfa drugs and atabrine.

Anyone who suggests scrapping the synthetic rubber industry or any of the industries developed during the war to supply us with strategic materials from which we were cut off during this war should be carefully investigated by the FBI. When the war is over, some sob sisters will feel sorry for the natives of Java because we no longer buy the huge quantities of quinine; others will feel sorry for the natives of the natural producing countries; and still others will even feel sorry for the Japanese because their silk market will be largely lost to domestic nylon which has already been proven superior to silk.

Let no one pay any attention to these pleas. If anyone wants to avoid any such feelings as these, let him look back at the record of the struggle of the organic chemical industry to become established in this country against all the tricks that the Germans had long used to prevent any such development. Regardless of the desire which all people will feel to establish international trade following the war, let us not be blinded to the fact that the industries developed during the war for the production of strategic materials are essential to the future protection of this country, and to the maintenance of this country's place as a dominant world power.

Synthetic Vitamin Production

SYNTHETIC vitamin production is running at the rate of 1,250 tons per year, according to Dr. C. R. Addinall, of Merck. He says that civilians in this country are receiving 51 per cent of the production, while 14 per cent is going to the Armed Forces, and 35 per cent to our Allies and friendly nations.

Perfume and Cosmetic Salesmen

THE perfume and cosmetic industry is going along at a terrific pace, the real limitations being the supplies of raw materials and containers and closures. Salesmen for these houses working on commissions are realizing incomes far above normal, and far above the incomes realized by salesmen working hard in drug, pharmaceutical circles. Naturally the incomes of these men are far above salesmen of perfumes and cosmetics working on straight salaries. We hope that these men will realize that these conditions are abnormal and that therefore these incomes cannot last. The abnormally high national income due to war production, and the fact that durable goods such as automobiles, refrigerators, washing machines, radios, and other things are not available is the reason why the sales of perfumes and cosmetics have skyrocketed. When the national income declines, as it must, and when durable goods again become available, the abnormally high level of perfume and cosmetic sales and the high incomes of those selling them on a commission basis, will be things of the past. Now is the time to think about this by putting a large part of this income into something for the future like war bonds.

FTC and Advertising

THE Federal Trade Commission, which has been conducting investigations and preparing reports for Congress on distribution methods and costs, has released part five of these investigations under the title of "Advertising as a Factor in Distribution and Costs." There appears under the Summary a section on Nature of Advertising, which says in part:

"Advertising is a firmly established and effective means of appealing to consumer interest and thereby of selling goods. It is used to introduce new products and to maintain consumer interest in established products and brands. In introducing a new product it may present to the consumer an entirely new or more economical means of satisfying wants. Its effect, when used to publicize a particular manufacturer's product or a particular merchant's business, may be merely to shift consumer demand from one brand to another or from one merchant to another without increasing the total volume of goods sold.

"Advertising may be informative, truthful or deceptive, attractive or repulsive and when used to excess by all manufacturers or distributors of a particular product, or by makers or distributors of substitute products, its effect may be to increase distribution expenses, which must either be borne by the consumer through higher prices or by the advertisers through diminution of profits. On the other hand manufacturers of or dealers in a new product may attract the public demand to this product to such an extent that production costs may be radically decreased."

Are Ethical Drugs Cheaper?

FOLLOWING up the article on "Ethical or Proprietary" in our November issue, we had someone inform us that an additional reason why ethical products are preferred is that the ethical products are cheaper. It was this man's contention that a well-known ethical cough syrup, for instance, gives greater value both in quantity and in ingredients than a well-known proprietary cough syrup. He further contended that the percentage of the selling price which the ethical manufacturers allowed for the cost of the product—less selling and merchandising costs—was higher than the percentage allowed by the proprietary manufacturers. We never investigated this phase of the matter and are not in a position to say whether he is right or wrong. However, it might be so.

English Drugs Under State Medicine

IVOR Griffith recently reported on the extent to which government sponsored health programs affected pharmacy as told to him in a letter from Hugh Linstead, secretary of the Pharmaceutical Society of Great Britain, where they have had state medicine for about half the people since 1911. Quotations from the letter:

"From the point of view of the public, the chief disadvantage of the present system (National Health Insurance) is that its scope is severely limited. It applies only to insured persons (employed persons with a salary limit of £240 per annum) but not to their dependents. It is a limited service in the sense that the benefits do not cover any and every form of medical treatment. Domiciliary treatment is adequate, including free visits and free medicines, but institutional and specialist treatment is dependent to some extent upon the facilities offered by the particular Friendly Society to which the insured person belongs.

"From the pharmaceutical point of view there are five headings upon which I might offer comments:

"1. *The effect of the service upon the public demand for proprietary medicines and specialties of individual pharmacists:* Since the introduction of the Insurance Act the sale of medicines outside the Act has increased the public interest in medicines with the result that more are being taken than previously. There is certainly no evidence that the state scheme has curtailed other pharmaceutical business.

"2. *The effect upon the number of prescriptions:* The introduction of the National Health Insurance scheme has meant a very large increase in the amount of dispensing undertaken by pharmacists. On the whole the scheme has had the effect of substantially increasing the general standard of pharmaceutical practice over the country, although a limited number of pharmacies of the highest class have had to adapt themselves to lower standards, e.g., in the matter of 'finish.'

"3. *Remuneration:* The remuneration is still not satisfactory. It is based on the assumption that the state business can be carried on the back of the ordinary business, but the dispensing fee in particular (which for most items is 5d per prescription) is far too low for the proper remuneration of a pharmacist. I am hoping that it may be possible in the negotiations which will have to be undertaken before the new arrangements are made, to establish the principle of payment for pharmaceutical service based on the actuarial cost of providing the state service and not on the basis that it is simply something to be conveniently added to existing business.

"4. *Pharmaceutical supervision:* Experience has shown that it is essential that a national service should be controlled centrally and locally by pharmacists. In other words there should be a responsible pharmaceutical department at the center and local committees for discipline, etc., throughout the country. If the service passes into direct control of nonpharmaceutical officials much of its efficiency will be lost.

"5. *General reaction of pharmacists:* I would say that the great number of pharmacists think, both on national and on pharmaceutical grounds—subject to the question of remuneration—that the National Health Insurance scheme is valuable. Very few (probably less than 1%) of all the pharmacies in the country have chosen to stay outside the scheme."

Post Exchange Surplus Disposal

THE Department of Commerce recently assured business men that the Army has no intention of dumping its stocks of post exchange merchandise on the market at the end of the war. A plan of liquidation has been developed whereby stocks at Army exchanges, recently inventoried at $31,000,000, will be offered as follows:

1. To other exchanges in the same service command.
2. To exchanges outside the service command.
3. To other Government agencies.
4. To the original seller or manufacturer, at the same price the Army paid for the goods, the Army paying the transportation back to the seller's warehouse.
5. If the seller won't pay this price, the goods will be put up for public auction.

American Home's Record

AMERICAN Home Products is planning still further expansion and for this purpose is selling to present shareholders on the basis of one share for each ten held, a total of 98,536 shares of common stock. A substantial part of this money will be expended on land, plants, machinery, and equipment to improve manufacturing facilities and to provide for anticipated growth of business in the ethical drug, household products, and food divisions.

The gross sales of the company have increased 424 per cent from $17,127,126 in 1935 to $89,743,662 in 1943 as the result of increased business of the units owned prior to 1936 and also as the result of the acquisition of a number of new units. Increase since 1935 of the sales of units owned at that time is 185 per cent from $17,127,126 in 1935, to $49,849,429 in 1943. Gross sales of businesses acquired between 1935 and 1943 expanded from $3,006,259 to $39,894,233. Net income before taxes rose 522 per cent from $2,121,503 in 1935, to $13,202,592 in 1943, and net income after taxes increased 183 per cent from $1,729,708 to $4,896,243. During this time the number of outstanding shares increased 37.5 per cent from 672,100 to 924,233 shares.

Since November 30, 1942, AHP has acquired eleven companies, among which are: Harmon Color Works, Ayerst, McKenna & Harrison, G. Washington Coffee, P. Duff & Sons, and Marietta Dyestuffs Co.

A. M. A. Rejects Cold Vaccines

THE American Medical Association has turned thumbs down on cold vaccines, both the Council on Pharmacy and Chemistry and the Council on Industrial Health of the A.M.A. state that none of the vaccines have been proven of any value and their use should be discouraged.

Pharmaceutical Houses Are Different

RECENTLY a rumor circulated within the trade that a soap company or a food company was bidding for the purchase of one of the larger privately-owned pharmaceutical manufacturing companies. The rumor now has died, since word has come that the offer has been turned down. We wonder just what would happen to the pharmaceutical manufacturing industry if offers of this kind were accepted. Certainly the ethical manufacturers in this industry are in a class by themselves. They do business in a way that is different from any other type of manufacturing house. They have been built up slowly over the years and cannot be duplicated or replaced in a hurry. They are the houses that make the pharmaceutical manufacturing industry what it is today. We cannot conceive of large houses gaited in an entirely different way making a success of owning these houses. Neither do we believe that such ownership would be of benefit to the industry.

Drugs and State Medicine

CONSIDERING the eventual status of the proprietary medicine business under medical care in this country by extension of the Social Security laws or by extension through group medicine under private enterprise, the British Medical Journal recently made some pertinent remarks. British medical care is furnished through a panel system under National Health Insurance, which the Journal says is likely to continue. However, the Journal says that the White Paper recently published "does not consider the general problems which will arise if medical care is provided free by the State but at the same time the supply of drugs is left to private enterprise." The Journal continues:

"It is a little difficult to see how doctors are 'to encourage a new attitude to health' if the patent medicine industry continues to spend £3 million a year on advertisements suggesting to people that they are ill and that they can only be cured by proprietary remedies. As a result of this campaign, apparently, three out of four people in this country are taking drugs without medical advice and in many cases to the detriment of their health. The use of proprietary remedies has increased since the introduction of National Health Insurance, and sales are much more closely correlated with factors such as the level of wages, the expansion of the popular Press, and the development of mass advertising, than with the standard of medical care. The proprietary medicine industry employs a capital estimated at more than £100 million and the annual turnover is thought to reach the figure of £20 million. By and large its effects on personal and social health are harmful, but no Government has ever had the strength or courage to control it."

Doctors and Prescribing

PRESCRIBING habits of physicians and the changes in these habits brought about by the war were recently commented upon by the British Medical Journal, which said:

"A generation of doctors has grown up which is completely unfamiliar with many of the gelenical preparations such as gentian, ipecac, and the vegetable diuretics. Quinine has been banned except for malaria, and even in malaria it has been declared inferior to atabrine in a recent American pronouncement. Bismuth salts have been forbidden here for dyspepsia and replaced by magnesium trisilicate and aluminum hydroxide. Sulfonamides and penicillin have ousted other antiseptics and chemotherapeutic agents in local, general, and urinary infections. What is to happen when controls are relaxed after the war? No medical service is likely to be a success unless it leaves the individual practitioner considerable freedom in prescribing. Is the doctor to become the unsuspecting victim of pressure groups interested in restoring the sales of iodine, bismuth, quinine or borax? In his post-box to be crammed with expensive advertising matter, and will he need to set aside a whole morning a week when he will be at home to travellers? Or is the supply of drugs to depend upon a judicial appraisement of the best interests of the consumer as well as the producer? The difficulty is that no one has a vested interest in sane pharmacotherapeutics, and therefore active steps must be taken by the profession or the community to redress the balance. The individual doctor or patient must be supplied with unbiased information."

Sulfa Drug Decline

THE decline in the sulfa drugs continues with production for September establishing a new low for monthly production this year. The year started off with a production of 653,798 pounds in January, followed by 663,816 in February, 630,775 in March, 520,867 in April, 336,835 in May, 234,014 in June, 246,450 in July, 220,543 in August, and 152,328. This makes a total of 3,659,426 pounds for the first nine months of the year. If production does not show an increase during the last three months of the year, total production for 1944 will be only slightly over 4,000,000 pounds, compared with a total of 10,000,000 produced in 1943. The reasons for the decline are the fact that the Army, Navy, and other Government agencies overbought very heavily last year, and the fact that increased supplies of penicillin are being used where sulfa drugs were used before. Production of sulfa drugs will probably settle down to what will be a normal level of production within a short time. Meanwhile, the pharmaceutical houses are not making any money selling tablets of sulfa drugs due to the cut-price condition that has existed among them for some months. As one pharmaceutical manufacturer described it recently, "The more sulfa drug tablets we sell, the more money we lose. Pressure on the suppliers of the sulfa drugs by the pharmaceutical manufacturers has failed to bring price reductions to allow the pharmaceutical manufacturers to make a profit on the tablets. The manufacturers of the sulfa drugs feel that the pharmaceutical manufacturers themselves are to blame for the condition, and they feel that if they reduce prices, the tablets will only be cut further.

Many industrial plants which have adopted vitamin feeding have reported studies indicating good results.

VITAMINS "ON THE SPOT"

MANUFACTURERS and sellers of vitamin preparations are described at the present time as being "on the spot." This is due to a number of factors, some of which are their own fault, and some of which are not. During the past month, one of the manufacturers has quit the field completely and has recalled all outstanding goods. This company is Standard Brands, which in the last two years introduced two products, namely, Stams and Stan-B. These products were widely advertised to the public, Stams being a multi-vitamin preparation containing minerals including iron and liver. In a letter to retail druggists the company states: "We have now come to the conclusion that under present conditions it is not possible for Stams and Stan-B to develop sufficient volume to warrant extensive advertising on a profitable basis." All goods outstanding in the hands of wholesalers or retailers are to be taken back at the prices paid for them by the wholesalers or retailers. Furthermore, retailers are asked to return their stocks directly to Standard Brands even though the goods were bought from a wholesaler, Standard Brands paying the retailer the full price that was paid to the wholesaler. The total cost of this action on the part of Standard Brands is variously estimated at between $1,500,000 and $3,000,000.

But Standard Brands is not the only company experiencing a headache from the vitamin business. The feeling in many directions is that the vitamin business has reached its peak and from now on a recession is in order. As we pointed out some months ago (D.C.I. Aug., 1944 pp. 158, 159) sellers of vitamins advertised direct to the public have not been making much headway as evidenced by the fact that the total volume of the seven leading sellers of consumer-advertised vitamin preparations is only 12½ per cent of the market, against a percentage of 24 per cent for the leading ethical seller alone. The ethical manufacturers are also seriously concerned about the future of vitamins since the sales of vitamin preparations account for more than half of the total sales of a number of pharmaceutical manufacturers. However, the ethical manufacturers probably feel that they are in a better position to meet the situation of a recession in vitamin demand than are the manufacturers who advertise their preparations to the public through the media of newspapers, magazines, and radio.

The feeling exists in some directions that claims made by some manufacturers advertising their vitamin preparations to the public have had much to do with the development of an apathy on the part of the ordinary individual toward vitamin preparations. These people also feel that these claims have had much to do with the repeated attacks upon vitamins being made by members of the medical profession and lay writers on health

problems. Some feel that these manufacturers have been inviting disaster in the manner of action by Government departments, as well as in the manner of criticism of the use of vitamins by prominent members of the medical profession. In his presidential address to the Annual Session of the American Medical Association, on June 13, of this year, Dr. Herman L. Kretschmer, had the following to say:

"It has been variously estimated that the people in this country will spend the better part of $250,000,000 this year for vitamin products. I do not wish to discredit the enormous progress that has been made in this field. . . . The treatment of some conditions requires vitamins. But these are problems for the physician and not for the radio broadcaster and the newspaper. . . . The excessive claims made for vitamins are beyond any basic medical evidence. . . . We must embark individually and collectively on a program of education as well as a program of debunking."

Obviously this statement was aimed more at the publicly-advertised vitamin preparations than at the ones sold through the detailing of physicians. Moreover, the presidential addresses delivered at the annual meetings of the A. M. A. are believed to have the approval of 535 North Dearborn St., Chicago, which is the headquarters of Dr. Morris Fishbein, editor of the A. M. A. Journal. As a matter of fact, Dr. Fishbein himself has not been remiss in the matter of criticism of vitamin preparations, referring to them as having taken the place of the tonics of old.

Furthermore, in the November 25, 1944 issue of the Journal of the A. M. A., there appeared an article by Drs. Julian M. Ruffin and David Cayer, of Durham, N. C., entitled "The effects of Vitamin Supplements on Normal Persons," the article reaching the conclusion that "the administration of vitamin supplements to a group of apparently normal persons, consuming the usual American diet, had no demonstrable beneficial effect."

Following the coalition of vitamin preparation manufacturers to fight the attempted action of the OPA to force lower prices on vitamin preparations, a large number of these manufacturers—both ethical and proprietary—undertook to form a National Vitamin Foundation designed to make grants for research in vitamin or related fields; to disseminate information to the vitamin trade, medical profession, and public with respect to the quality, purpose, and uses of vitamins; to adopt terminology and standards of publicity practices in connection with the sale of vitamins; and to confer with medical societies, medical schools, health organizations, public health agencies, and governmental agencies with respect to vitamins and the vitamin industry.

The first meeting for the creation and organization of such a foundation was held in New York last May, but to date very little if anything has been done to whip the organization into shape. One of the largest of the ethical vitamin preparation manufacturers is not interested in the organization, and the interest of several other large ethical manufacturers is said noticeably to be waning. Some of those who were most enthusiastic when the idea was first conceived, are now frankly discouraged as to the possibility of such an organization being developed, or if developed, amounting to anything such as was originally planned.

It appears that the ethical manufacturers are not anxious to tie up too closely with the proprietary manufacturers in the formation of a vitamin foundation for the reason that they can deny that any of the criticism of the exploitation of vitamins is leveled at them. This is because the ethical manufacturers make no attempt to promote vitamins in any other way than through the doctor, and if the doctor is responsible for their products, their business will continue as long as the vitamins are believed by the doctors to be beneficial. After all, ethical manufacturers are only successful in selling any of their various products insofar as they are used in modern therapeutics. They cannot continue to promote any particular product past the time that the doctors have lost faith in it. Therefore, they will continue to profit from vitamins as long as the doctors prescribe or recommend them, and no longer. Perhaps they feel that the criticism leveled against the advertising of vitamins is undermining the entire vitamin business, and that the sooner the advertised vitamins stop their aggressive promotion the better.

Another factor which might well be responsible for the threat of a recession in the vitamin business is their lack of stability under certain conditions. It is well known that vitamin A is very fugitive, particularly so as the result of oxidation. It is reported that manufacturers of vitamin preparations put into their products a surplus of from five to twenty per cent, depending on the vitamin, of the labeled potency. When many vitamins are put together in the same tablet or capsule, there appear to be chemical reactions that take place over a period of time that are not very well understood. When minerals, particularly iron, and liver are added, deterioration might be hastened. For this reason the shelf life of vitamin preparations is not as long as manufacturers would like to have it. Furthermore, the retail druggists are carrying an extremely large number of vitamin preparations all of which do not move with the same rapidity. Also the druggist might put the fresh stock in front of the old on the shelf and sell it first leaving the old material on the shelf to deteriorate still further. It might be that this deterioration of vitamin products on the shelf of the druggist or in the home of the consuner—who might not take them consistently—is responsible for a lack of effect which some people might feel, developing further the apathy of the public toward these products.

Physicians well know that vitamins are beneficial in many conditions. And contrary to the report of Drs. Ruffin and Cayer that addition of vitamins to the usual American diet produces no demonstrable bene-

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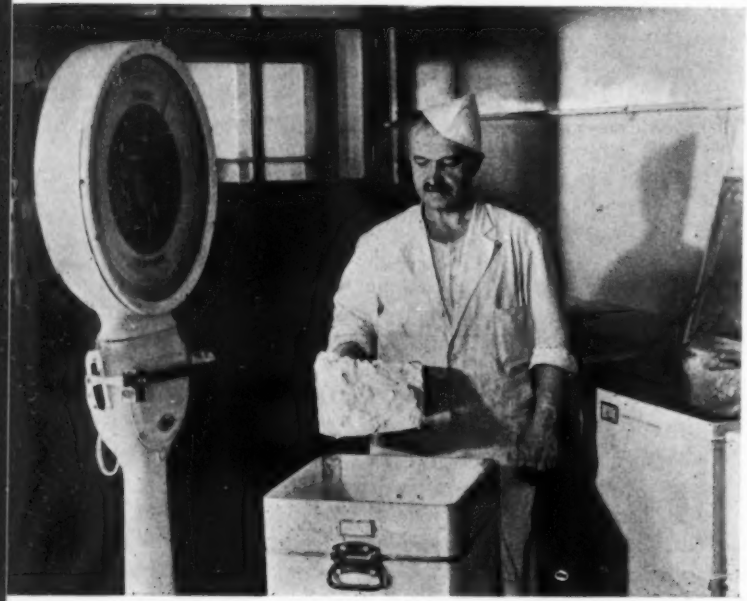
Face Powder

By JOSEPH KALISH



PHOTOS COURTESY COTY, INC.

IT IS amazingly simple to formulate and manufacture a face powder that will be acceptable to most potential consumers. Acceptable covering or hiding power, an attractive odor, and a range of six or more shades can be devised by more or less duplicating averages ascertained from a few of the most popular brands. Mix and sift the required ingredients, package attractively according to the notions of a qualified merchandiser, and start the wheels of distribution and promotion. The proportion of the total market reached will depend upon distribution and promotion; the proportion of the market *held* may well depend upon quality built into the face powder. Without being able to express her reasons for liking a face powder, a woman nevertheless can usually feel a preference as between two brands she has tried.

As usually listed, face powder qualities include slip, adhesion, hiding power, color, and odor. We shall add two others of equal importance, namely, bulk and whiteness.

Adhesion of face powders has, in our opinion, been greatly over-emphasized. Modern powder bases of the cake, oily liquid, or cream types are enjoying ever-increasing sales and provide adhesion (and covering power) no matter what the powder quality in this respect may be. More often than not, adhesiveness of face powders will show up as caking. On excessively dry skins, powder will accumulate on and around flakes of dried skin and accentuate these flakes; oily skins will usually produce progressive darkening of the powder shade; on skins that are oily in some parts and excessively dry in others, both effects will appear and the result will be splotchiness. In addition, the same skin will change its quality from week to week as well as from season to season. It seems reasonable to assume from this, that a powder of low adhesion, disappearing completely from the face in one to two hours, would be less likely to lead to undesirable effects than a powder with some adherent components.

Slip, from the point of view of the consumer, is merely the degree of ease with which a powder may be smoothly and uniformly spread over the face. From our technical point of view, slip is imparted by the diluent or "carrying" medium in face powders, talc, colloidal clay, etc. in much the same way that water and alcohol are the solvents for active ingredients in other preparations.

Covering power is the ability of the face powder to hide minor skin blemishes and imperfections. Here again, covering power has lost much of its meaning since the advent of powder bases able to change the character of the skin surface to a much greater extent than any powder. Nevertheless, the opacity of powder mixtures is still to be considered, especially in connection with colors, and there does seem to be a direct relationship between hiding power of face powder and the type of finish given to the skin.

Little can be said about odor. Powders sold in connection with a successful perfume line will be perfumed to match popular odors, for ensemble effect. In other

cases, the effort usually seems to lie in attempts to develop an attractive, reasonably lasting odor that will blend with the usual run of odors used in cosmetic preparations. Quite often, however, the odor is selected without reference to any other perfume that may be present in the ensemble. Dozens and sometimes even hundreds of tests may end up with a choice made by the sales manager who is sure he knows what the customers will like. Irritation, or allergic reactions from face powder perfumes is uncommon. Perfume suppliers are careful to keep known irritants out of perfume compounds that will remain in contact with the skin over extended periods. In addition, much of the perfume, absorbed by the powder, is quickly dissipated as the powder falls away from the face. Finally, some instances of irritation by face powder have eventually been traced to the added drying effect of absorbent powder on excessively dry skins.

Color is unquestionably the most important face powder quality. A powder that has been meticulously formulated, perfectly manufactured, and beautifully packaged, still cannot be sold if its color is unattractive. Because this is so, many producers have adopted the safe, if unimaginative, procedure of duplicating more or less exactly the shades of competitive products with the largest sales. This observation may be made: for the most part women seem to use, and manufacturers supply them with powders that are too light in tone. Insipid yellows and pinks have little beneficent effect upon skin coloring.

Yet the original shade of the face powder, its color in the box, is only the beginning of the color requirements. Of major importance is the color on the face after skin secretions have permeated the powder. Many powders turn darker and yellower, or darker and redder after they have been on the skin for a while. This is in itself sufficiently serious, since the original shade has been replaced by something quite different; but the deepening of color is greatest where oil secretion is heaviest, and the final effect is one of splotchiness.

Bulking power of face powder is in itself less important than sometimes thought, since top selling brands include very light, fluffy products and others which are quite dense. After it has stood for a time in the unopened box, and especially after it has been used for a while, even the most bulky powder settles and becomes much more dense. Application to the face in relation to bulk is another matter, of considerably greater importance. Even after a bulky powder has settled and seems to be no different from the more dense type, it will behave differently. The difference is like that, in application to the skin, between an aqueous alcoholic lotion and a heavy liquid cream. The dense powder acts like a cream; it stays under the puff when first applied and can easily be spread uniformly. The bulky powder seems to spread out by itself from under the puff and is inclined to scatter; somewhat more work with the puff will be necessary to attain a smooth finish.

Whiteness, oddly enough, is more closely connected with the bulking and covering power of the powder than with its shade, Very often, when first applied to the face, the powder will appear many shades lighter in tone than it did in the box. After use of the puff to spread the powder, whiteness becomes less marked and the true shade, as seen in the box, develops on the skin. It will be found that dense powders, and those of low hiding power will exhibit less whiteness or less deviation between shade on the face and in the box.

From these considerations, it is possible to set up a more or less ideal standard, but this will not be done here because of individual preferences. Rather, we shall make certain observations regarding formulation with respect to each major property.

Slip is a property of talc and to a lesser extent of colloidal clay and other materials that cannot as yet be defined on a quantitative basis; it is felt between the fingers as an unctuousness, a lubrication, of a slipperiness. Since talc comprises from 70 to over 90 per cent of the face powder, its qualities determine the slip of the final powder, and once a particular grade has been adopted, it must be continued. The whiteness of talc, it seems, is only of indirect importance, since the final powder is never white. On the other hand, it is easier to make exact matches of shade from batch to batch if the talc remains constant in whiteness. Additional factors in selecting talc may well be mentioned in this place. Its covering power varies according to its type and origin, but is of relatively little significance, affecting only top tones of the final powder. More important is the presence of micaceous particles or "shiners." These little glistening specks are usually not affected by the processing the powder undergoes and may be disconcertingly evident in the opened box. Finally, hard, sharp silica or tremolite particles in talc have no effect upon the finished powder but may be abrasive to processing equipment. Furthermore, although talc itself has a clean bill of health as regards silicosis, this is not true if a substantial proportion of silica or tremolite is present.

Adhesion is generally ascribed to the stearates, zinc, calcium, magnesium, the first being by far the most common, yet it is doubtful that these have much effect upon other ingredients, although they will themselves adhere tenaciously to the skin. At the same time, white and colored pigments seem to be quite adherent even in the absence of stearates. Oil is often included in face powder to improve adhesion; although it probably has some value in this direction, it serves other, more important purposes. It counteracts the drying effect of absorbent face powder ingredients on dry skins, it deepens the color of the powder, and it reduces the dustiness of bulky powders.

The hiding or covering power of a face powder is a direct property of its zinc oxide and/or titanium dioxide content, other components contributing little. Titanium dioxide has from three to five times the *dry* covering power of zinc oxide, and this must be remembered in substituting one for the other. To show how strongly various qualities of face powders are inter-related, we bring in two additional considerations

at this point. Although zinc oxide and titanium dioxide are the powder ingredients with highest covering power, zinc stearate, which provides bulk, has enormous effect upon dry covering power. The bulkier and fluffier the powder, the greater will its covering and hiding power be, partly because of the additional coverage provided by the stearate, but mainly because individual particles of opaque white components are spread more uniformly over the surface. The other factor to be considered in relation to covering power is whiteness. Of two powders with apparently the same shade in the box, the one with the greater coverage will at first be considerably whiter on the skin, even though it may eventually be smoothed out to give the same final tone. Covering power has an enormous influence on shade. For the same amount of color, the tone will be paler or deeper as the proportion of opaque white pigment is greater or less. Finally, covering power, at least with respect to its effect on shade, will differ in dry powders and in those containing oil. This is most important and will be discussed in connection with colors.

Bulk is given to a powder by the incorporation of zinc stearate and by methods of processing that occlude large quantities of air in the finished product. Silica aerogel in finely powdered form is an extraordinarily bulky material and imparts bulk to powders when it is present in very small proportions. Even when very fine, however, it is still quite gritty, and its use might introduce a health hazard in manufacture. It may well be that bulking ingredients in face powders possess their greatest utility in permitting the incorporation of larger quantities of oil. Although it is often thought that oil should be added to bulky powders to reduce their dustiness, powders should really be made bulky to permit the addition of larger amounts of oil and thus bring about truer, consistent color tones.

All face powder discussion must lead to colors. If shades are not acceptable, nothing else matters, and many factors must enter into formulation for correct tone quality. First, the list of colors permissible for use in face powders, earth and lake colors, is sufficiently large to permit virtually unlimited shade making. This, however, is no reason for using every color on the shelf each time a shade is developed. No more than four pigments need be used for any shade, although the individual colors needed for a range of shades can be many more than this number. Here are the problems to be considered. The pigments must be blended to give the desired top tone *in connection with* the titanium dioxide and zinc oxide used in the formula. The higher the proportion of white covering agents, the larger the amount of colored pigment required. But the greater the coverage, the greater the undesirable whitening effect. If coverage is reduced to lessen whitening, then oil tones will suffer.

The ideal face powder will exhibit the same shade in its dry state or when made into a paste with an oil. This rarely occurs. The oil shade is not only considerably darker; it is also often of a different tint, more red or more yellow. Nor is the oil test merely a chemist's brainstorm; it represents a very good laboratory approximation of what happens to face powder on the skin when natural oily secretions begin to be absorbed by the powder. This would be bad enough, but the bad effects are even worse, since this oil absorption does not take place uniformly over the skin surface. One phase of the solution to the problem lies in increased coverage. For example, a light tint made by mixing talc with a small amount of color will become very much darker on addition of oil. If, however, a certain amount of titanium dioxide is included with the talc and color (more color being necessary to get the same dry tone as before) much less darkening with oil will occur, and if enough white pigment is used, practically no darkening will take place. The effect of titanium dioxide in keeping colors true in oil is very much greater than that of zinc oxide. Don't forget, meanwhile, that this new powder mixture, while remaining reasonably true to tone on the skin will exhibit a rather high degree of whitening when first applied. The next procedure involves the addition of oil to the powder. At this point it might be well to indicate the oil mixture that is favored in face powders. Mineral oil can be used alone. and will have the desired effect on the tone, but will have no emollient effect on the skin. A vegetable oil would be very good for both purposes, but when distributed throughout the powder and thus spread into a thin layer would be very likely to turn rancid. Lanolin and mineral oil make a highly satisfactory combination. If *less* titanium dioxide is used with the color than is required to keep the tone true when the powder is mixed with oil, the addition of a small amount of oil to the powder will produce some darkening. Further addition of oil, as from the skin, will now have much less effect, and the shade will remain true. Addition of oil to the powder is limited by the fact that more than a very small amount will make the powder unpleasantly pasty.

In short, only those who have never formulated a face powder can say that formulation is simple.

The processing of face powder is relatively straightforward. Oil and perfume are rubbed with part of the talc and the whole batch including colors, is mixed in the usual double helical mixer, or the less usual double cone type. Mixing should be thorough. The batch is now either passed through a sifter or through a mill. Grinding gives a uniform product but represents no special problem, since all normal face powder raw materials are in a fine state of subdivision before processing. Particle size seems to have only minor influence on face powder properties. Bleeding of colors—making a paste of color, water, and part of the talc and zinc oxide, drying and then grinding and then finally mixing with the rest of the powder—may be a good idea, except that the finished powder seems to be in no way different from one processed by simple mxing.

Control, as in every instance where quality is desired, is very important, both of raw materials and of finished product, but is far too extensive a subject to be tacked on to the end of a formulation article.

The Why's of Foreign Trade-Marks

By JOHN H. GRAHAM

With the closing of each war, philosophers and hedonists alike begin to measure the good which can be salvaged from the wreck.

Out of this present conflict, we can see one result already, namely that boundaries have disappeared, the world has relatively shrunken in size and our countless thousands of uniformed ambassadors of good will are spreading the doctrine of the American way of life to every point of the globe. So, when the peace does arrive, the international market must open up and nowhere can it be more active than in the drug and cosmetic industry.

Thus, it might be good to look at your trade-marks and your patents now with a searching eye to see where you should expand your protection.

Many persons have expressed their fear of governmental restrictions on foreign trade in the future, and thus are hesitant about investing money in such foreign protection. The answer to this is simple. Unless a manufacturer has either a foreign market already established in a certain country, or has a branch plant there for manufacture or distribution, foreign protection must be somewhat in the nature of a gamble, and your money must go on the line. To wait until the race is won is too late to bet, and, accordingly, it is not possible to hold up the decision.

With respect to trade-marks, one of the major reasons for early consideration is the possible irrevocable loss of what you think are your rights in a certain mark due to the fact that in many foreign countries the first *registrant* is acknowledged to be the owner of the mark and even in the face of sales in that country, this prior registrant can defeat your belated attempt to obtain protection.

Of these countries, the majority are Pan-American, and as our neighbors, they are in a position therefore to "pirate" your mark should you not be the first to register this in the country. Many a trade-mark owner has found to his cost, the tortuous and expensive path to be followed to buy back *his own* mark from some prior registrant and usually the existence of the prior registrant is only discovered after positive steps have been taken to launch the product in that country.

Of these countries, the following are given as those of more importance at the present time since the war restrictions do not prevent registration being applied for now:—

GROUP I. Countries where *First Registrant* acquires exclusive rights on *Registration* of a mark or after the limited periods set forth:—

Argentina	
Bolivia	**(After 1-1½ years)**
Brazil	**(After 5 years)**
Chile	**(After 2 years)**
Costa Rica	
Cuba	
Guatemala	
Mexico	**(After 3 years)**
Peru	
Uruguay	**(After 2 years)**
Venezuela	

GROUP II. Also the following countries should be noted as of the same classification as Group I:—

Egypt	
Iran (Persia)	
Russia	
Spain	**(After 3 years)**

GROUP III. Other countries not open to registration now, but of the same classification as Group I:—

Germany	
Finland	
Denmark	**(After 5 years)**
Norway	**(After 3 years)**

Most of the other major countries in the world give the rights of registration to the first user of the trade-mark, but again it should be remembered that this refers in most instances to use of the mark in the country *itself* and, except for a six month's priority period granted by those countries who are members of the International Convention, the existence of a trade-mark in this country has no effect.

This International Convention has been ratified by many of the principal countries in the world and provides that, by filing in any other country of the Union of contracting countries within six months of the first date of filing application for registration of the trade-mark in a Convention country, priority dating to the original date of the original filing in said first country is obtained. It should be carefully noted, however, that of our neighbors given in Group I only Brazil, Cuba and Mexico are members of the Union, only Spain is a member in Group II, but in Group III all four countries are members of the Union.

Thus, at the present time, it is possible to file trade-mark applications in countries of Groups I and II, and decisions regarding these should not be left over to an indefinite future date since it may be too late then.

There are, of course, other countries open to present action besides those specified in Groups I and II, the principal of which are:—

GROUP IV. Countries *(Continued on page 700)*

PERFUMER'S ZOO

by Edward Sagarin

THE imagination of the public has often been captured by the idea that animal materials are used in perfumery. And the layman is even more astonished to learn that these products, some of which are revoltingly malodorous, are necessary to give the fixative qualities to most good perfumes.

Various animals have been put to use by perfumers for many centuries. In his "Cyclopedia of Perfumery," E. J. Parry cites references to musk in the tenth and eleventh centuries, and from the writings of Leo Africanus quotes the recording of these gifts to a mountain chief from the Sultan of Fez: "Fiftie men slaues and fiftie women slaues, sixteen civet-cats, one pound of civet and a pound of amber." The amber referred to is ambergris.

Like the essential oils, the main animal oils and resins come from far-away parts of the world, and until recently nothing of importance came from this country. The habitat of the civet cat is the corner of Africa now known as Ethiopia, scene of two wars between the natives and the Italians. The musk deer is found in many almost inaccessible spots in Asia, chief of which is the legendary land of Tibet. Ambergris is found in the ocean, or washed ashore, anywhere at all, on the most infrequent and unexpected occasions. The beaver is trapped in the cold regions of Canada, and now the muskrat has come forward, the newest contributor in this field, a native of the U.S.A.

A small survey of these oils reveals that they include some of the most powerful odorants known, some of the most efficacious of perfume fixatives. One of these animal products is among the most unpleasant of perfume materials, another is one of the most expensive materials in our trade, and a third is no doubt the most important of the new developments in the science and art of perfumery. Indeed a diversified contribution for a small group.

The substance whose odor is so unpleasant is, of course, civet. The civet cat is an animal found in many parts of Asia, such as Bengal, Malaya, Burma, in Java and other islands of the East Indian archipelago, in Ceylon, Formosa and Africa. It is only the African civet that has been developed commercially for perfumery, and on that continent the development has been restricted to Ethiopia.

The scent-pouch of the civet cat is developed in the animals of both sexes. Inasmuch as the civet gives off its valuable secretion when it is being molested, it has been assumed that nature provided these pouches as a protection, in order to frighten away other animals which threatened the existence of the species.

The civet is a wild animal, but when caught it calms down a little. It is kept in captivity, fed on raw meat

COURTESY NAUGATUCK AROMATICS

to increase the output, and then placed in a cage, constructed in such a manner that it cannot turn around. The animal is teased, and the scent-bag is scraped and irritated. Aroused to its full ire, unable to bite, kick or escape, the civet gives off its odorous material.

Chemically, civet has received considerable attention. It contains some skatole and indole, two malodorous perfume materials which are now made synthetically. But the main contribution to the odor of civet is the ketone known as zibethone or civetone, a very high-boiling substance which has also been duplicated by synthetic means.

In perfumery, civet, like the other animal products and many plant resins, is known as a fixative. Itself very lasting, as would be expected from its high-boiling constituents, it makes the perfume more lasting also. It is said to "round out" or, to use a perfumer's coined expression, "to bouquet" a perfume. In a jasmin compound, for example, tincture of civet will take the rough edges off the benzyl acetate.

Of all the animal products used in perfumery, the one employed in greatest quantities is castoreum. Castoreum, or castor as it is called, is obtained from the

(*Continued on page 744*)

Lubricating Jellies

By M. A. LESSER

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LUBRICATING jellies, often referred to as surgical lubricants, are made almost exclusively for physicians, surgeons and nurses. Although practically unknown to the general public, the lubricants hold a most important place in the medical world because they so greatly facilitate examination and instrumentation of the body openings. It would be no exaggeration to say that every practicing physician possesses a tube or jar of lubricant and that such a product is to be found on the shelves of every examining room. Taking into consideration the number of physicians and hospitals in this country, it is quite obvious that lubricating jellies command a substantial, highly ethical market.

Used on the hands or rubber gloves of the examining or treating physician, these jellies not only facilitate digital manipulation, but also help to avoid irritating the tissues of the patient. These lubricants also render a most important function on catheters, colon tubes, sounds, specula, vaginal and rectal nozzles and other instruments when these are employed in gynecological, urethral, rectal and similar examinations or treatments.

Decades of use have established certain standards that these lubricants must meet. They should be sterile, clear, bland and nonirritating and spread readily and evenly to form a transparent, smooth, protective film on fingers, gloves or instruments. Nor

should these lubricants interfere in any way with the physician's sense of touch. Lubricants should be noncorrosive to instruments and have no deteriorating effects on rubber gloves or catheters. The modern trend is to insist upon products that will wash off readily with water, but oily products still find occasional use. Lubricants that will not stain or discolor the skin or linen are preferred.

In a general way, surgical lubricants may be divided into two main categories—greasy and nongreasy products, with the latter predominating in preference among physicians. These in turn may be subdivided into simpler classifications. Greasy lubricants, for example, fall into groups based upon liquid petrolatum or vegetable oils. The nongreasy types include simple chondrus (Irish moss) mixtures, chondrus-glycerine jellies, glycerine tragacanth jellies, and glycerine-starch combinations. The war, with its limitations and restrictions on certain essential materials, has also led to the development of new types of lubricating jellies, but it is to be presumed that these will remain only temporary expedients in most cases.

From the above it is evident that glycerine and liquid petrolatum form the basis of most lubricating compounds, and indeed these substances have been used as such on gloves and instruments.[1] As a matter of fact, tests performed with these materials as prototype lubricants have revealed information of definite importance with regard to the conservation of rubber gloves and catheters. A few years ago, Aquodro and Barbour[2] compared glycerine and mineral oil as lubricants for rubber catheters. The tubes were lubricated with each of these fluids. After five minutes the tubes were washed in a soap solution, rinsed with water and then boiled for five minutes. After 37 boilings, the oil-treated tubes were flaccid, without resiliency, cracked and otherwise unfit for use. The glycerine-treated catheters, after 200 boilings, were still firm and only a little lighter in color, as compared with non-lubricated but similarly treated control tubes.

Thanks to war-time conservation education it is now realized that oils and greases are among rubber's worst enemies.[3] In addition to the deleterious effects on rubber, one cannot overlook the fact that oils are immiscible with water and are not so easily washed off as the nongreasy surgical lubricants. The linen-staining proclivities must also be borne in mind. Moreover, under certain circumstances, the use of oil as a lubricant may be an actual source of danger. Miller,[3] for example, mentions that an oil-lubricated tube used in the treatment of intestinal obstruction may present danger of aspiration of the oil into the trachea with the possible production of so-called lipoid pneumonia. The same obviously holds true in cases where tubes are similarly used in the modern antacid drip treatment of gastric ulcers.

All of these facts may help to explain the popularity of nongreasy surgical lubricants over oily products. Among the simplest of the nongreasy products are those based upon chondrus or Irish moss which forms a smooth, soft gel when mixed with water, as in the following formula given in the "Pharmaceutical Recipe Book III:"[4]

Chondrus	**30.0 Gm.**
Liquefied phenol	**2.0 cc.**
Water, to make	**1000.0 cc.**

Wash the chondrus with cold water, then place in a double boiler and heat with 800 cc. of water for half an hour. Strain through muslin, add the phenol and add sufficient water to bring to volume. This procedure provides a thin lubricating liquid. If a thicker product is desired, the strained liquid may be evaporated down to remove about one-third of the water and the phenol then added.

A modified product of this type, suggested by Prinz[5] as a lubricant for syringe pistons, sounds, etc., consists of:

Irish moss	**1 part**
Gelatin	**1 part**
Phenol, 2 per cent solution	**32 parts**

Macerate the first two ingredients in the phenol solution over night. Then heat the mixture carefully, and while still warm strain through gauze.

According to Bennett[6] a preparation now on the market is stated to contain the gelatin of Irish moss plus eucalyptus and formaldehyde. Such a preparation, it is stated, may be made by adding to 16 fluidounces of Irish moss mucilage, 10 drops of oil of eucalyptus and 5 drops of solution of formaldehyde.

Irish moss may be combined with other mucilaginous substances and glycerine added to provide its own advantageous lubricating and emollient qualities. A well-rounded product of this type is prepared according to the following method:[6]

Irish moss	**10 oz.**
Water	**12½ pints**

Allow to macerate for 12 hours, then add:

Glycerine	**1¼ pints**
Sodium benzoate	**1½ drams**

Heat for 15 minutes and strain. In a separate vessel prepare a mucilage made from:

Quince seed	**2½ oz.**
Water	**3 pints 12 oz.**

Allow to stand for 24 hours, strain and then add to the above Irish moss-glycerine mixture. Finally add and mix well:

Eucalyptol	**1½ drams**
Sodium benzoate	**1½ drams**

Glycerine-tragacanth bases are among the most widely employed for making lubricating jellies that meet the highest requisites. A quite simple product of British origin, recommended[7] well over a decade ago, is:

Phenol	**3.0 per cent**
Glycerine	**10.0 " "**
Tragacanth	**2.5 " "**
Distilled water, to make	**100.0 " "**

(Continued on page 740)

PHOTOS COURTESY BRISTOL-MYERS CO.

DENTIFRICES

By E. G. THOMSSEN, Ph.D., Consulting Chemist

THE actual method of making or compounding dentifrices warrants considerable attention In presenting this part of our subject we will consider the machinery required, the actual formulae for various types of powders, creams and liquids, and the modus operandi. The formulae which are given are not necessarily the best available ones, nor is it necessary that their composition be definitely fixed. They are presented as a guide more plainly to outline the procedure used in manufacturing operations. We will follow through with each type of dentifrice.

Tooth powders are the simplest to manufacture. The necessary equipment to make and fill, as well as the formulation, are simpler than those for pastes or liquids. The equipment most generally used for making tooth powders, is dry mixers, powder fillers, together with the necessary package closing machinery, conveyors, storage bins and pre-mixers. This is all standard equipment that requires but passing comment. The most important consideration is the mixer. This should be constructed of materials that will not discolor the product and the stirring equipment should be so constructed that the mixing operations are thorough enough to produce a homogeneous mixture in the time required. A smaller pre-mixer to incorporate those ingredients present in smaller amounts, like sweeteners, colors and flavors, is found to be very convenient and cuts down the mixing time. These ingredients are

also thus better distributed and in some cases there is considerable saving in labor. In other cases manufacturers prefer to produce a more uniform powder by passing the finished mixed powder through an attrition type mill on the way to the storage tank which supplies the powder filling machines.

There are various classes of tooth powders on the market. These comprise the most common or foaming, abrasive type, those that contain charcoal, the medicated type and the dissolving type. Two common formulae for foaming type of tooth powder are as follows:

I

160 lbs. Precipitated Chalk, dense
20 lbs. Calcium Sulfate (Chrysalba)
30 lbs. Neutral White Soap Powder
5 oz. Saccharine
3 lbs. Flavor

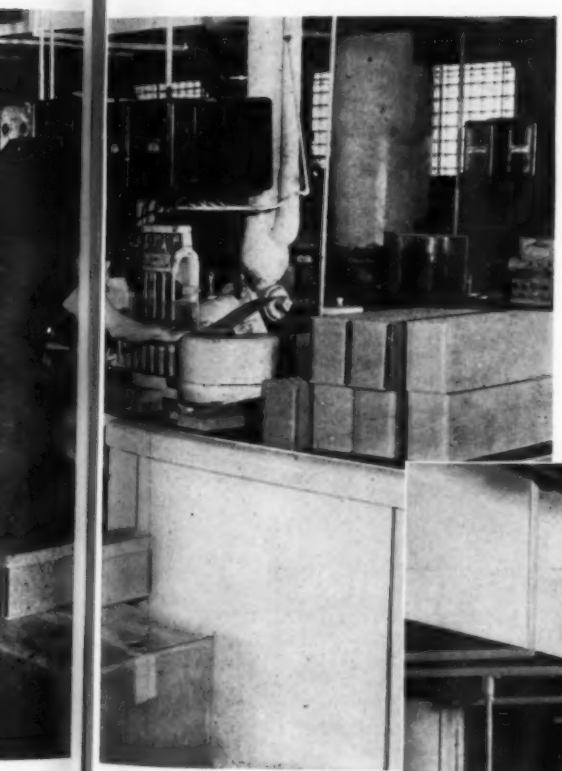
II

44 lbs. Precipitated Chalk, dense
20 lbs. Precipitated Chalk, light
25 lbs. Silica Air-floated (000 grade)
1 lb. Zinc Chloride
5 lbs. Castile Soap Powder
5 lbs. Borax
4 oz. Saccharine (Soluble)
1 lb. Flavor

A tooth powder which contains charcoal may be made by this formula:

100 lbs. Ground Willow Charcoal
90 lbs. Precipitated Chalk, dense
30 lbs. Neutral White Soap Powder
6 oz. Saccharine
4 lbs. Flavor

(Continued on page 748)



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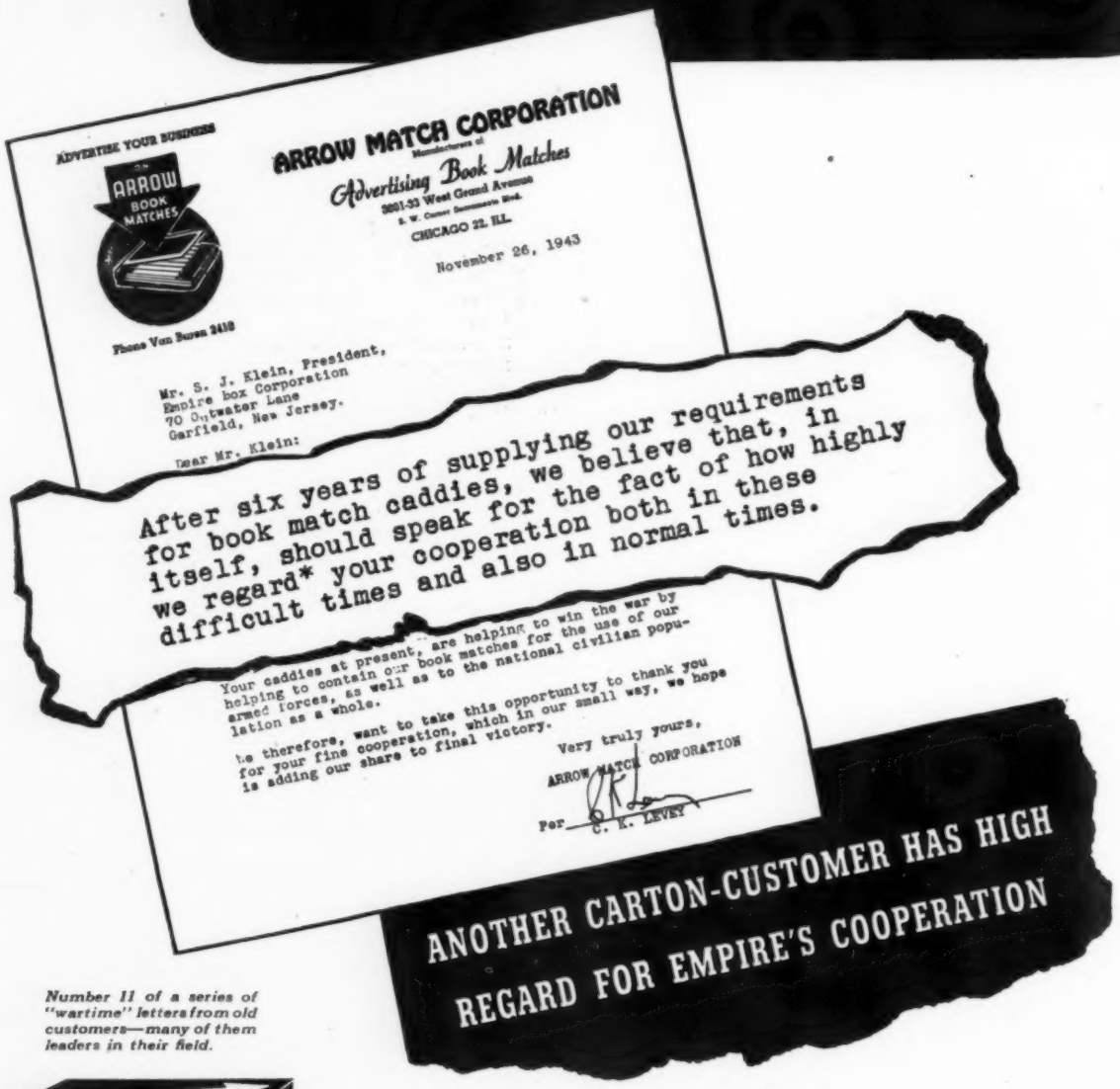
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Mr. S. J. Klein, President,
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Dear Mr. Klein:
After six years of supplying our requirements for book match caddies, we believe that, in itself, should speak for the fact of how highly we regard* your cooperation both in these difficult times and also in normal times.
Your caddies at present are helping to win the war by helping to contain our book matches for the use of our armed forces, as well as to the national civilian population as a whole.
We therefore, want to take this opportunity to thank you for your fine cooperation, which in our small way, we hope is adding our share to final victory.
Very truly yours,
ARROW MATCH CORPORATION
Per C. K. LEVEY

ANOTHER CARTON-CUSTOMER HAS HIGH REGARD FOR EMPIRE'S COOPERATION

Number 11 of a series of "wartime" letters from old customers—many of them leaders in their field.

While continuing to give *old* customers unusual preferential service—Empire can now consider your needs as a prospective *new* customer. Simply write us about your package requirements.

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Packaging and Selling

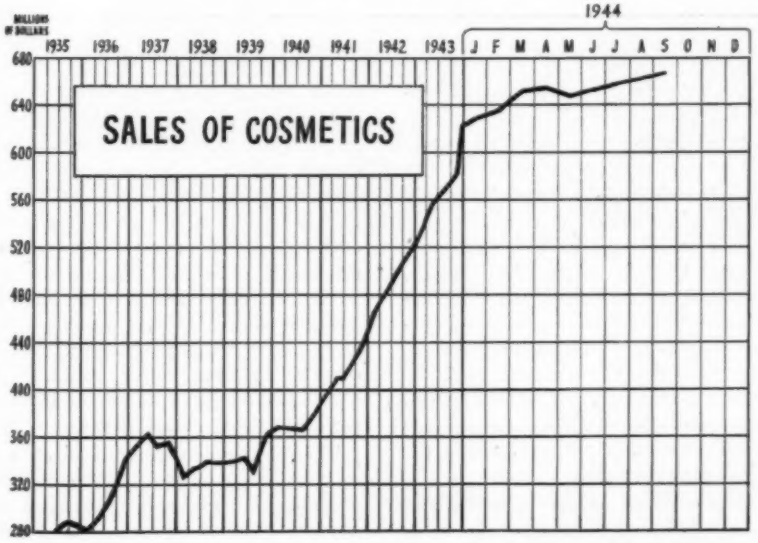
Innocents Abroad

Excitement ran high, as well it might, as a result of the U.P. report out of Paris, November 11, which stated that, "Thirty thousand gallons of expensive French perfume, costing $16,000,000 and wrapped in 3,000,000 Christmas packages, are flowing through United States Army postoffices to every nook and corner of America." With more haste than good judgment, there were those who wanted to apply the restrictions guaranteed to the holders of all important perfume trade-marks in this country by refusing entry to this "flood" of perfume. There were others who advocated advertising the fact that most of the perfumes purchased by servicemen overseas were spurious. This would have been nothing but the truth but unfortunately, it too, would probably have had no other effect than to produce ill will. At any rate, the perfumers very wisely, in our opinion, decided to do nothing except to advise the Collectors of Customs that individual gifts be permitted entry but that wholesale duty-free importations should not be allowed.

This latter had reference to some reports from France that in some cases efforts had been made to secure 500 to 600 bottles of well-known brands for shipment to the United States. No quarrel can be found, of course, with the legitimate purchase by a soldier abroad of a bottle or two of perfume for his wife, sweetheart or mother. No quarrel, of course, except the fact that in most cases the boys are being swindled. The peddlers and hawkers of North Africa, Italy and now France must be doing a land office business in old bottles filled with almost anything. Some represent actual attempts to copy existing packages and every manufacturer in this country with offices in France now has quite a collection of counterfeit packages brought in by recipients who didn't think the quality was up to standard. In most cases, if the case looked authentic, the perfumer would usually explain that the product was a fake and then, if he felt that the counterfeit was interesting enough to add to his collection, would swap a legitimate package for the illegitimate one.

However, the bulk of this soldier business is apparently being done in "concentrates." This does not require the finesse and facilities for producing reasonable facsimiles of packages. It simply requires a bottle and some wax, and access to a liquid which may or may not smell pleasant. This concentrate is peddled as something which, when alcohol is added, will become a Chanel No. 5 or a Shalimar or some other famous brand. So it's safe to assume, that of the alleged perfume mailed from France something like one in a hundred is the McCoy. There just aren't 3,000,000 packages of real perfume around after four years of German occupation.

Anyhow, the figures as given don't make much sense, for thirty thousand gallons at an average price of $20 an ounce would make close to 80 million dollars worth of perfume at going prices in this country. Well our entire perfume business done with 130-odd million people will probably be about 45 million dollars at retail this year. Is it sensible to assume that some 8 million of our people overseas will buy almost twice as much as the 130 million here? Even if we accept the U.P. figure of $16,000,000 that still has them buying better than one-third as much as all the rest of us put together. No matter how you look at it, it doesn't make sense. And maybe it's just as well, for there's nothing about it that does much for the cause of friendly international relations.



Retail sales of cosmetics for the twelve months ended with September totaled $666,867,000. This compares with $662,448,000 for the twelve-month period ending with August, and with $573,514,000 for the twelve-month period ending with September 1943.

Advertising Expenses

Drug and medicine advertisers in 1940 spent 13.94 per cent of their sales for advertising, according to the Federal Trade Commission's report on "Advertising as a Factor in Distribution." In 1939, the percentage was 15.12.

In 1939, the cosmetic industry's percentage of advertising to sales was 20.65. In 1940 cosmetics were omitted thus making drugs and medicines ration of advertising expense the highest of the 86 industries studied.

Other drug percentages were: selling and delivery expense, 13.41 per cent; direct material, 27.52 per cent; direct labor, 5.74 per cent; other labor, 3.50 per cent; depreciation 1.21 per cent; repairs and maintenance, 1.23 per cent; other costs and finished goods, 4.33 per cent; corporate taxes, 1.21 per cent; social security and pension fund payments, 0.92 per cent; research and development expense, 1.32 per cent; administrative and general office expense, 5.50 per cent; uncollectible accounts, 0.18 per cent.

But Is It Cosmetic?

The height of something or other was probably reached by the men's line "His" when it advertised a solid 18K shaving bowl for $1875, plus tax. The punch line on the ad was "Soap not Included." That will give you an idea of the relative value of soap and of gold in these war years. It also raises the question of whether or not "His" figures this as cosmetic volume or jewelry volume. Move a couple gross of this merchandise and you can raise merry hob with sales figures in this industry. Just think of the poor buyer who sells say two dozen of these things and then tries to meet the same figures next year. He might have to put in some platinum talc cans w thout the talc, or some diamond studded eyebrow tweezers.

Container Production

In "Domestic Commerce" for October Edward J. Detgen, acting director, Containers Division, War Production Board, says that "In the consumer-container group, glass containers have shown the largest rate of increase in the war period, with the 1944 volume projected at twice the 1940 rate. There has been a complementary increase in closures used for these glass containers but the rate of increase has not been as great because of the tight restrictions placed on the use of metal which, in some instances, has resulted in the reuse of these closures.

"Collapsible tube production has gained substantially during the war period, with its 1944 output estimated at a level almost 50 per cent above the 1940 rate. Folding boxes have also increased with a reported 1944 volume about 30 per cent above the 1940 prewar level. The three groups of consumer containers which are expected to drop below their 1940 volume are metal cans, set-up boxes, and grocery bags. The anticipated declines in these items are 6 per cent, 19 per cent, and 48 per cent, respectively."

The actual figures are: for metal cans 2,044,000 tons of steel; glass containers 104,000,000 gross; folding boxes, 1,773,000 tons; set-up boxes 498,000 tons; collapsible tubes, 5,565,000 gross.

The Cosmetic Trend

While most of the larger buyers of cosmetics are inclined these days to follow a hand-to-mouth policy, shifting the responsibility of carrying reserve stocks from their warehouses to the stock room of the manufacturers, a considerable amount of budgetizing is done, nevertheless, in buying offices. The present outlook is that stocks of cosmetic gifts will be pretty much cleaned out after Christmas and that, in consequence, repurchases may have to be made of non-Christmas gift lines. As to staples, most buyers expect that they will place orders for approximately 30 per cent of their annual requirements between now and the first weeks of February and that the relative quantities will be higher than those bought for the corresponding months of 1944, but only just match the current quarter's figures.

However, all planning for the future must be done with an eye upon sudden changes and budgets are tentative. Buyers are conscious of the fact that there has been in recent years a heavy shift in the direction of the cosmetic demand, depending largely upon local conditions. Department store sales of cosmetics have generally advanced more rapidly than the all-over retail average and this applies also to favorably placed chains. The closing down of many smaller stores, because of war conditions, has been a factor. But there is evidence of increasing stabilization. This may mean slower progress for the department stores and favored chains and a swing back to independents and neighborhood stores. Buying plans must take care of this eventuality.

The problem, though, is not so much one of volume or even price but grouping of assortments. The war has brought upon the toilet goods counters "frail" brands of perfumes, fancy labels, and articles carried more often by gift shops than by upstanding cosmetic counters. Many buyers feel that these articles have served their purpose during the war, but that they can not be relied upon for volume with the return of normal conditions. There is, for this reason, a growing tendency to step warily. This makes itself particularly noticeable in cases where buying is done by a central office for geographically widely distributed stores. More buyers, probably, are inclined to favor the regular established lines of staples than at any time since 1939 in the expectation that from them will come the bulk of their sales. This should be a warning to the lucky owners of these war babies that the time has come when it will have to be encouraged to grow up. Buyers will enquire more frequently about "merchandising" plans before they renew orders.

Add Surveys

A survey by Fawcett Publications shows a marked increase in the use of cream colognes, foundation or vanishing creams, sachets, perfumes and bath oils. It shows a rise of 12 per cent for 1944 over 1943 in the number of women who use foundation or vanishing cream for a powder base. The most favored brands continue to be Pond's, Woodbury and Lady Esther and 41 per cent of the purchasers buy them in drug stores, 23.9 per cent in 5 and 10 cent stores and 24 per cent in department stores.

The number of consumers of cream cologne rose in 1944 to 16.8 per cent over 3.7 per cent for 1943 whereas the number of users of cologne or toilet water remained about the same. Evening in Paris, Lentheric and Hudnut are again the leading brands of cologne or

Beauty AND THE FEAST

". . . and our new package, gentlemen, went over very well. Dealers liked it, displayed it. Consumers bought. Sales are increasing."

Thus, frequently, do salesmanagers report the *results* of change to a *better looking* package. And witnessing such results—through 78 years' packaging experience with leading merchandisers—Ritchie has learned how vital *beauty* in packaging is to sales.

BEAUTY SELLS!

It attracts all people everywhere—influencing their choice in everything from motor cars to mates—from the neckties they buy to the homes they choose to live in!

It influences their choice in packaged products. It's not coincidence that best selling products are the best packaged. Other things being equal—the most attractively packaged product invariably outsells competition.

That's why, in every Package by Ritchie—whether it contains a rare perfume or 50 toggle bolts—you will always find, in its lines, in its proportions, color or general design, a strong eye-pleasing quality—elements of beauty.

PACKAGES BY RITCHIE

PROVE THAT BEAUTY SELLS!

HOW TO GET A PACKAGE THAT SELLS

Let Ritchie design your future package and it will have beauty *more than skin deep.* It will have the right material and structure for its job. It will be practical, convenient to use, easy to handle, to stack and display. It will proclaim your product-identity. It will be memorable and attractive. And Ritchie's expanded, war-developed facilities for volume production assure its low cost. Let Ritchie demonstrate how *you* can get a better selling package. No obligation. Write us today.

W. C. Ritchie AND COMPANY

8831 BALTIMORE AVENUE · CHICAGO 17

Set-Up Paper Boxes • Fibre Cans • Transparent Packages

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS

Consumers COAST-TO-COAST *Reveal...*

WHY THEY PREFER BUYING DRUGS IN CANS

HERE ARE THE *5* MAJOR REASONS
HOUSEWIVES GAVE IN RECENT NATION-WIDE SURVEY

- **Cans are safer!** They don't break, chip, split, leak or tear. Safe when handled with wet hands.
- **Cans protect your health!** Keep out germs and dirt. Directions lithographed on can—no labels to drop off.
- **Cans protect product quality!** Cans are waterproof.
- **Cans are more convenient!** They're easier to open, to use, to clean, to store. Not easily tipped over.
- **. . . And they're more economical!** Cans are less expensive.

SO YOU, in planning your post-war packaging, can take advantage of these proved consumer preferences . . . and plan now to pack your product in that familiar, well-liked container, the steel-and-tin can!

★ ★ ★ ★ ★

BIG ADVERTISEMENTS IN FULL COLOR BOOST PUBLIC PREFERENCE FOR CANS

Every month more than 30,000,000 printed messages—full pages in full color—are reminding consumers of the many advantages of cans.

The forceful and convincing sales story of the steel-and-tin container reaches most American families through leading Sunday newspaper supplements and the ten great national magazines shown here.

CAN MANUFACTURERS' INSTITUTE, INC., NEW YORK

NO OTHER CONTAINER PROTECTS LIKE THE CAN

Packaging Forum

By Josephine von Miklos

Foil papers seem to be starting on their way back! Now we can go all out again for shiny boxes (if we can get boxes) and wrappers, and what have you, and, if nothing else, what a joy it'll be to thumb through the beautiful sample books and know that once again we're not just looking at historic records.

There's talk now that Nylon will be used for lipstick cases . . . Nylon, the miracle among miracle plastics, which can be molded so thin that you can step on a tube of it and it won't break. If the story about lipsticks is true, the big problem in plastic lipsticks, the bulk, will, of course, be eliminated, since a wall thickness of around .020 is pretty much what we have been looking for. However, I wouldn't go too far overboard yet on any of this, just yet.

Some cosmetic people are thinking seriously about combining brass and plastics for post-war lipsticks; i.e. the mechanical parts to be made of brass, the decorative parts, the sleeves, of plastics of all kinds. Lucite sleeves were around, of course, before the war, but the trouble with completely transparent sleeves has always been that they get smeared up by the sticks and look pretty messy as soon as the sticks are really used. There are, however, several ways of getting around this problem: sandblasting of the inside of the sleeve, which gives it a matte surface; elaborate carvings on the outside surface which will reflect the light at many angles; metal plating of parts of the surface; and finally, heavy silk screening.

Talking about silk screening: a method has been developed which can put plastic inks on plastics, fusing both together and giving the effect of two or more colors of material. Pretty fancy development that, and full of great possibilities, although not all plastics can, as yet, be treated in this way. So far it works only well on thermoplastics.

I can't help feeling that the dearth of set-boxes is, in some ways, a pretty good thing. Maybe we'll learn to design better packages, put more emphasis on container and color and printing job of the items themselves, if we can't camouflage them with enormous platforms and all those devices which make things look like more than they are. A big, heavy, platformed and super-designed set-up box somehow or other only makes real sense if it also serves for some after use. Maybe this is where wood is going to come in more and more until we can use cardboard again as we used to. There's a great deal to be said for things made in basic materials such as wood, which fit into the decorative scheme of a room, and almost become part of the furniture and fittings.

Which is a point we've been harping on for some time now. Cosmetic containers in and of themselves ought to be considered from the point of view of architecture and decoration just as much as things which are primarily bought for decorative purposes. Not that a cosmetic line designed in the style of the Renaissance, let us say, should be used only for its outside appearance; but in designing cosmetic lines, a much greater variety of themes, of styles, of color schemes could be used than are being used now. Pink's all right. But must EVERYTHING be pink? People use blues, greens, even grey and black, all around them. Couldn't cosmetic packages be conceived to fit into a general scheme of living since they are so much a part of a woman's general scheme of things?

Post-War Note

Anyone who has been left cut and bleeding by those relics of the Inquisition called hair curlers, will be relieved to note that the post-war boudoir is to be adorned by plastic hair curlers in place of the metal ones. Celanese Plastics says that 80 out of a 100 women are born with straight hair and want curls, and that these new curlers are light, clear, transparent, rust-proof, and more comfortable to sleep on.

Living Faces

Marinello products, which have always been distributed only through beauty shop channels, have been completely restyled and repackaged and are being offered for distribution to drug and department stores. The entire cosmetic color of the Marinello line has been restyled and is being featured as "Living Face" cosmetics. In its new grouped colors for basic types, Marinello Living Face cosmetics supply soft, natural looking tints in make-up, which is to be the selling approach. The packaging is effective in aqua, topped with a pink satin bow.

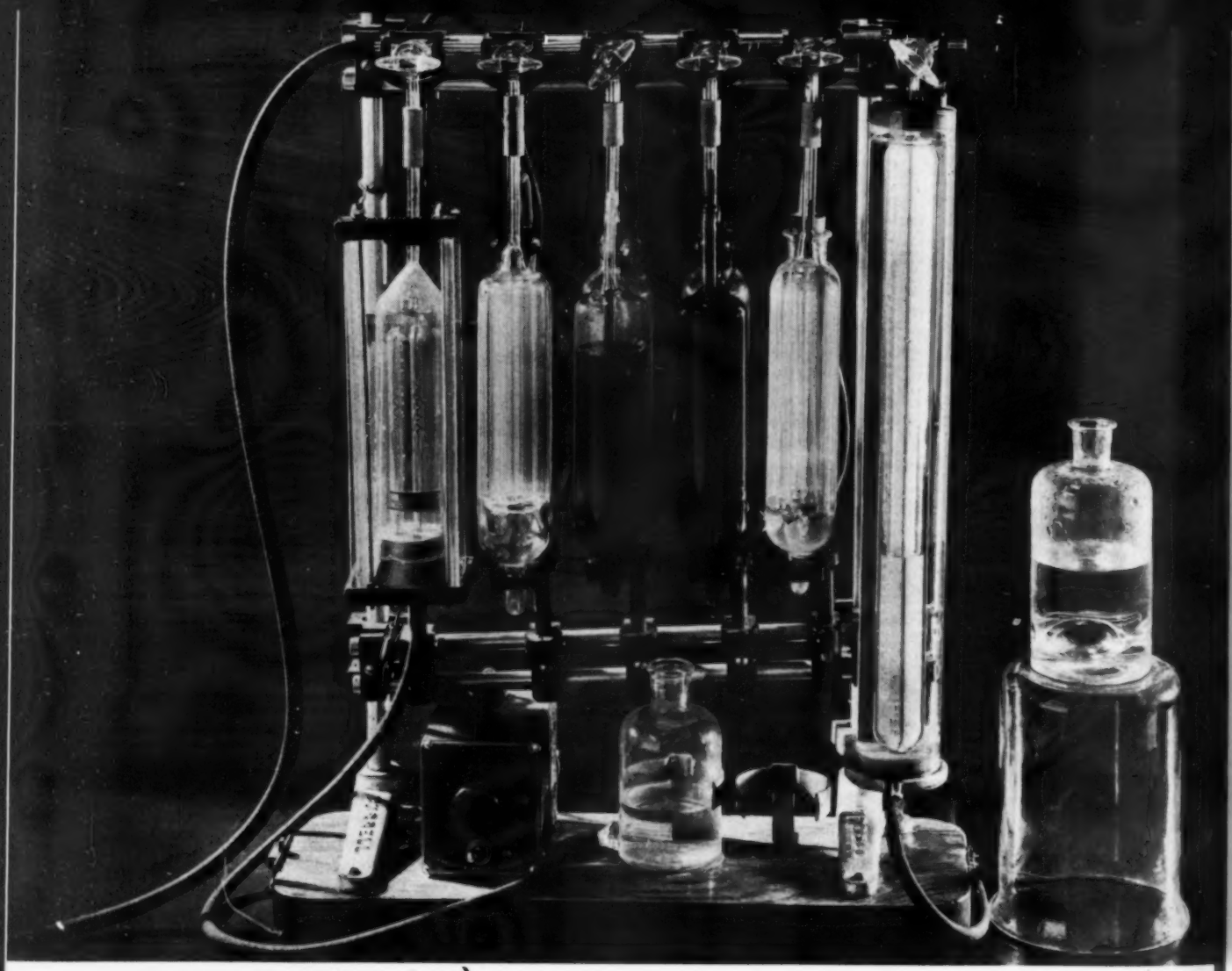
Gold Vanity

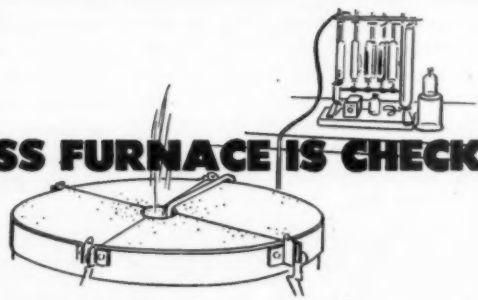
A powder compact made of solid gold and fastened with a sapphire clasp has been introduced through retail stores over the country by Roger & Gallet. It carries a price tag of well over $500—$540 to be exact—which includes the government tax. This luxurious toiletries item was fashioned by Cartier. The round, jewel-like case measures 3¼ inches across, which is quite sizable as compacts go, and has a pink gold medallion decoration. The inside is fitted with a mirror, lambs wool puff and a large cake of hand-pressed powder. A suede holder is also supplied for protecting the compact in the handbag. Is this by any chance, a forerunner of the luxurious cosmetic world to come?

toilet water and Lentheric. Lelong and Arden lead the cream colognes.

Tastes in perfume are more expensive. Not only do more women use perfume today but there is an increase in the purchases of expensive brands. For instance Tabu is now used by 9 per cent whereas in 1943 only 3.7 per cent used it. The favorites, however, continue to be Evening in Paris with 36.7 per cent and Coty with 17 per cent.

The most popular brands of bath powder were Evening in Paris, Cashmere Bouquet and Avon; the most popular brands of bath salts or water softeners were Wrisley, Bathasweet and Avon; and the most popular bubbling baths were Sutton and Evening in Paris.





EVEN THE "BREATH" OF A GLASS FURNACE IS CHECKED

Research leaves nothing to chance in its efforts to make better glass

IF you've ever adjusted the air feed on a burner—like the one on your kitchen gas stove—you know that when the flame doesn't get enough air, it burns yellow and smoky and deposits soot on utensils. Much the same is true of a glass furnace. And that's why Armstrong's glass chemists keep a constant and accurate check on the amount of air their glass furnaces "breathe."

For when a glass furnace doesn't get enough air, it is inefficient, and the quality and color of the glass are affected. On the other hand, if a glass furnace should get too much air, this also will affect the quality of the glass produced.

So in order to make sure that their glass furnaces get just the right amount of air for proper combustion, Armstrong's glass chemists constantly check the furnace gases with gas analyzing apparatus. They pass a measured amount of the "exhaled" gases through reagents. From the amount of gas absorbed by each liquid, they can tell if the furnace is "breathing" properly.

This precise control over the breathing of a glass furnace is another practical demonstration of how the work of Armstrong's glass chemists, engineers, and physicists—closely coordinated with actual production—is helping to make, and keep, Armstrong's glass top quality.

Other interesting examples of the painstaking care and skill that go into the making of fine glass are contained in an illustrated booklet, "Men and Glass." For your free copy, write to Armstrong Cork Company, Glass and Closure Division, 3812 Prince St., Lancaster, Pa.

ARMSTRONG'S GLASS

and **ARMSTRONG'S CLOSURES**

Ruling the Waves

The increasing shortage of hairnets, due to the war, has prompted the Rieser Co., makers of Venida hair nets and other beauty accessories for women, to launch a new hair-creme which will be distributed by drug stores and through the notions and toilet goods departments of department stores throughout the country. In a new campaign to "rule the waves" of men as well as women, the new Venida Hair-Creme will be directed to all members of the family. It is suggested especially for dry hair. It not only helps keep the hair well groomed without a greasy effect, but also helps to keep the scalp in a healthy condition. In addition to the Hair-Creme for dry scalps, the Rieser Co. will continue a large-scale promotion on the Venida Liquid Lacquer which is recommended for grooming of oily hair. Looks as if Venida is determined to rule the waves one way or another!

One-A-Month

Infron Pediatric—the result of important clinical research—is now being introduced to the medical profession by Nutrition Research Laboratories, Chicago, the manufacturers of Ertron. Infron Pediatric is specially prepared, highly purified electrically activated, vaporized ergosterol (Whittier Process).

The contents of one Infron capsule (100,000 U.S.P. Units) is a sufficient dosage for one month, which greatly simplifies the administration problem. It may be mixed with the feeding formula, milk, fruit juice or water—or may be spread on cereal.

It is supplied in packages containing two vials, each vial containing three capsules. One package is a six months' supply.

Color Harmony

Pinaud has entered the realm of cosmetics with a new color harmony in make-up. It is called Synchrotone and is composed of four shades of lipstick, rouge and cake make-up. The Synchrotone palette of four shades in three make-up creations is basic and yet gives an extreme variety of choice. According to Pinaud, any one of the shades can be blended with another. For example, any shade of Synchrotone lipstick can be harmonized with any shade of Synchrotone rouge or cake make-up. In other words, the colors cannot conflict—they are interchangeable and adapt themselves to any combination. The packages are simple but effective in pink and black. The cake make-up retails for $1.25, the rouge at 60 cents, and the lipstick comes in two sizes, 60 cents and $1.00. Prior to its presentation of Synchrotone, Pinaud launched a new perfume line called Lilianelle, and inspired by the bell flowers that grow in the forests of Lorraine. The line consists of perfume, essence, dusting powder, sachet, soap, and talc, and is attractively packaged with the tiny bell flowers as its decorative motif. This is the first time in many years that Pinaud has shown any activity in the new products field.

Teen-Age Glamor

Horwitz & Duberman who have been catering to the junior miss with Judy 'n Jill fashions, are now also in the perfume business. A new perfume called Judy 'n Jill is directed to the young crowd. Attractively packaged, it sells for $5, $8.50, and $15.00. The motif on the label and box also comes in a print for the junior miss. Judy 'n Jill is a light, bright perfume that remains sweet and refreshing. While the junior miss market in perfumes is new with Horwitz & Duberman, it is not an untapped market in itself. Several years ago Lentheric introduced its Pink Party line directed to the teen age girl. Pink Party offers her perfume, bouquet, all-purpose cream, face powder, rouge, lipstick, lip pomade, bath and talcum powder, soap and sachets. Of course, Rose Laird has pioneered in the teen age field, but her efforts have been devoted largely to the problems of adolescent skin rather than the glamor angle, although the line does include sweet smelling preparations.

Saint and Sinner

Adrian, the American designer, who has on occasion startled the fashion world with his unique creations and who has achieved vast influence in the field of fashion and design, will shortly launch two perfumes and their colognes. The two fragrances will be intriguingly presented to the consumer as "Saint" and "Sinner." The presentation of two perfumes signifying two entirely different moods or personalities is an interesting one and might well set a trend, since it lends itself so well to selling both perfumes to one woman who can, with a few well chosen words from the salesperson, imagine herself a Saint during the day and a Sinner at night! Wishful thinking perhaps but it makes an excellent selling point. The design of the Adrian bottles for Saint and Sinner closely follows the column design so prominently featured in the Adrian salons in Beverly Hills and in the advertising. Saint is an ethereal fragrance, and Sinner is a heavier scent for the gay in spirit. A twosome (one-half ounce combined) will sell for $12.50. The one ounce single presentation is priced at $25, two ounces $45, and four ounce $80. Distribution is to be made to a select list of accounts throughout the country by Parfums Adrian, New York. A substantial advertising campaign is also planned. Saint and Sinner should reach the consumer some time in January.

Meyercord Decals

ASSURE FAST, COLORFUL BRAND IDENTIFICATION

Smartly designed packages deserve smart, modern identification. Investigate the unlimited effects in color and design obtainable with genuine Meyercord Decalcomania. Any number of colors, any design can be reproduced in any size—for application on glass, wood, plastic, glazed crockery, etc. Special production line techniques provide speedy, economical application on flat or curved surfaces. The durability and permanent adhesion of Meyercord Decals protect your brand-mark for the life of the product . . . and serve as permanent salesmen for repeat purchases. For full details write Dept. 14-12.

Solon Palmer, Inc., New York, N.Y. use this multi-colored Meyercord Decal brand-mark (brown, yellow, and red) on the smartly designed blond wood package (illustrated above) containing their ASCOT BRAND Shaving Soap.

World's largest producers of DECALCOMANIA

Back the Attack . . . Buy War Bonds

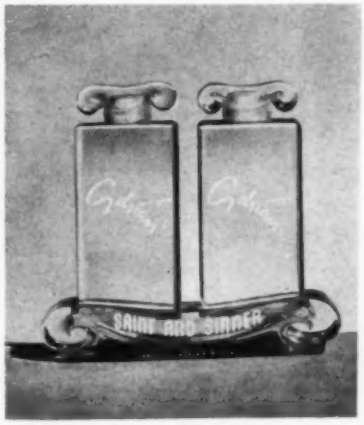
THE MEYERCORD CO. CHICAGO

Main plant and general offices: **5323 WEST LAKE STREET, CHICAGO 44, ILLINOIS**

Sales offices in principal cities of U. S. A., Mexico and South America

Horwitz & Duberman who have been catering to the junior miss with Judy 'n Jill fashions, now offer her a perfume named Judy 'n Jill.

Pinaud has entered the realm of cosmetics with a new color harmony in make-up—Synchrotone—composed of four shades of lipstick, rouge and cake make-up.



Adrian, well-known American designer, will shortly launch two new perfumes and companion colognes, intriguingly named "Saint" and "Sinner," and cleverly packaged.

New Designs

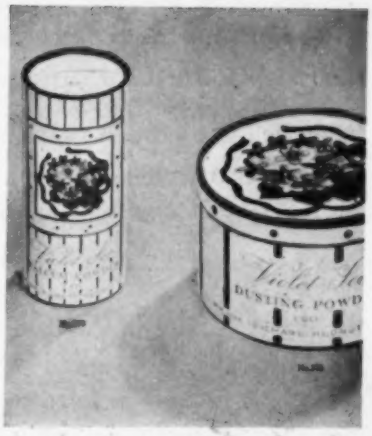
Following the complete restyling of its Yankee Clover line earlier in the year, Richard Hudnut follows through in the restyling of its Violet Sec and its Gemey lines. The new package designs carry a much more sophisticated feeling. The Gemey packages and labels are a delicate peach with a central motif of raised flowers in a deeper shade combined with blue. Gift boxes are silver with a central floral motif of peach and blue. The popular Violet Sec coloring is pink and gold with the violet flower motif. Delicate coloring, simple, effective, marks the new Hudnut packages.

Newcomer

About a year ago the Jantzen Knitting Mills, Portland, Oregon, famous for years for their swim suits, launched a product directed to the cosmetic market. It is called "Jan" and is a liquid described as an outdoor cream for sun, wind and snow, which protects, softens, and beautifies the skin. Jan is designed to protect the skin from sun, wind and snow; to soften, soothe and refresh the skin, and to screen out harmful rays of the sun but promote tan. The product has been sold largely on the west coast and is gradually working its way east. While distribution has been through sporting goods stores, Jantzen plans to promote it also through the drug and department stores in the future. It sells for 59 cents for a three ounce bottle, and seems to be a natural to complement the Jantzen swim suits.

Precious Stuff

de Heriot Inc. of Hollywood, Calif., has introduced a new face powder to supplement its White Lace make-up. de Heriot Poudre de beaute is packaged in a crystal clear box of plastic. The soft color of the powder effectively gleams through the transparent box. It is tied with a dainty pink silk cord and two tassels. It comes in six popular shades, The introduction of face powder to match the make-up shades appears again to be indicative of an effort being made by manufacturers to promote face powder along with cake make-up, the latter having been a threat to sales powder shades for some time. The rather unusual feature of de Heriot's face powder is its price—six ounces for $5. Schiaparelli has introduced Radiance face powder—six ounces for $6.50—but that's Schiaparelli! Five dollars is still a lot of money for six ounces of any face powder.



Richard Hudnut's Violet Sec bath line has been completely restyled. The new package designs in pink and gold carry a more sophisticated feeling.

Jan, a product of the Jantzen Knitting Mills, is a liquid described as an outdoor cream for sun, wind, and snow—to protect, soften and beautify.

de Heriot Inc. has introduced a new face powder to supplement its White Lace make-up, packaged in a crystal clear box of plastic which shows the face powder shade.

A FRIEND IN NEED

For cuts, scratches, minor injuries and non-poisonous insect bites Campho-Phenique is a soothing antiseptic dressing. It is used by thousands for first aid purposes as well as by physicians and dentists in their practice.

This well-known and time-tested antiseptic solution is a product of James F. Ballard, Inc., St. Louis, Mo. It is but one of a number of Ballard products that are securely sealed with Crown Screw Caps . . . the caps with the patented Deep Hook Thread. They spin on faster, are easier to remove and give 50% to 100% more sealing pressure with the same amount of application force.

CROWN CORK & SEAL COMPANY

Closure Division • Baltimore 3, Md.

WORLD'S LARGEST MAKERS OF METAL CLOSURES

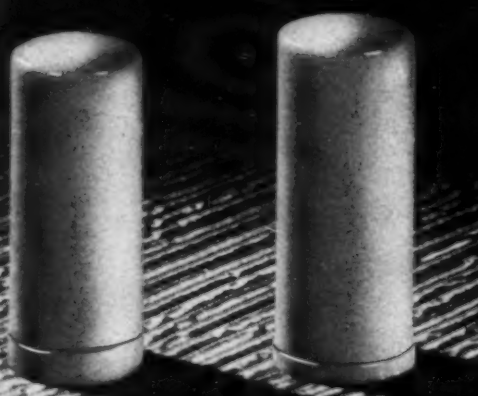
CROWN CLOSURES

Two New Members . .

of the

BRODER

Lipstick Family



No. 104
Super-Jumbo
All Plastic Swivel
with ½ inch CUP

No. 103
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All Plastic Swivel
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7/16 inch CUP

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Clearsite gives you all the advantage of visibility of contents, but the resilient, *shatterproof* protection of Clearsite means protection despite accidents. Colorfully "labeled-in-process" Clearsite is attractive, durable, economical. Ask to see

SHATTERPROOF
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ALSO MANUFACTURERS OF EXTRUSION & INJECTION MOLDED PRODUCTS

* Registered U. S. Pat. Off.

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CELLUPLASTIC CORP.

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EXTRUSION AND INJECTION MOLDERS

60 AVENUE L NEWARK, N. J.

WEST COAST REPRESENTATIVES CONTAINER SERVICE CO., 1266 North Western Avenue, Los Angeles 27, Cal.

By the time a case of medical supplies reaches a front line hospital unit it has been handled, rehandled, and jounced around times without number. It's no wonder that ordinary bottle caps loosen their grip unless helped by a secondary seal to prevent leakage.

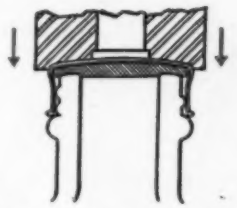
But experience has proved that *no help is needed* when bottles are sealed with Alseco R-O (Rolled-On) Seals. Atabrine and other medical supplies are being shipped overseas sealed with only an R-O.

The reason why an R-O needs no help from a secondary seal lies in the method of applying it. As the diagrams (right) show, the R-O is pressure-seated first; then the threads are Rolled-On to hold that pressure seal. Thus, every R-O is tailor-fitted to the bottle it seals. No loose fitting *max* caps on *min* bottles. No working loose in shipment.

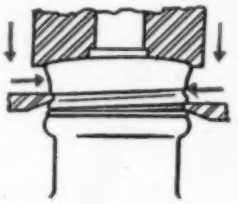
Furthermore, with aluminum R-O's there is no rusting, an important advantage for export goods particularly.

But whether your product is sold here at home or goes overseas it will be sealed better with an Alseco R-O. It is not only an efficient but also an economical seal. May we lay costs on the table beside your present costs?

Why Alseco Seals seal better



Plain-skirted Alseco Seal is uniformly seated. Under stationary top pressure, container lip is embedded in liner evenly all around.



While held in that position, threads are Rolled-On to conform exactly to threads on container. Each seal is tailormade, fits perfectly.

Trade Mark Reg. ALSECO SEALS U. S. Pat. Off.

ALSECO

TAILOR-MADE

SEALS AND SEALING MACHINES

ALUMINUM SEAL COMPANY - 1323 THIRD AVENUE - NEW KENSINGTON - PENNSYLVANIA

At your service: 30 years of experience building quality seals and sealing machines

-MEGATHERM*-ELECTRONIC HEAT

Here is high-speed uniform heat—precision controlled and directed—offering tremendous possibilities for new products and new processes . . . for faster, more efficient production . . .

That's Megatherm—high-frequency electronic heating at its best—a modern tool with uses as broad as industry itself.

In the processing of plastics, foods, drugs, candy, paper, textiles, wood products, and in printing, book-binding . . . in the surface hardening of metals, brazing, soldering, and annealing . . . to mention only a few of an endless number of possible applications.

Megatherm is available in a range of compact, efficient models—powers from 3 kilowatts to 100 kilowatts. One of these models is right for your work.

Now, while you are planning for the future, is the time to get the story on Megatherm—learn how it will speed your production—cut your costs—make new designs—new products and new materials possible. Write for data.

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Federal Telephone and Radio Corporation

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INDUSTRIAL ELECTRONICS DIVISION

AN IT&T ASSOCIATE

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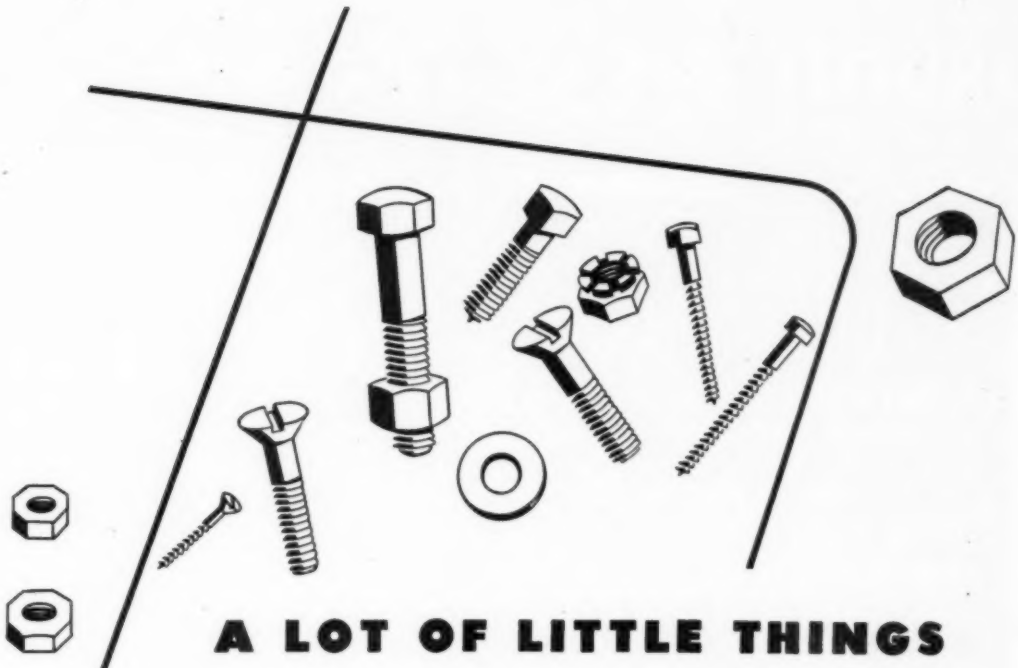

A LOT OF LITTLE THINGS

Bolts, nuts and screws play a part in building almost any machine . . . a lot of little things but each one highly important to the whole.

Glass containers, too, are made up of a lot of little things . . . little things in their manufacture which make the difference between a product that is just average and one of outstanding quality. Constant insistence upon precision and accuracy, continuous checking of methods and workmanship, steadfast adherence to the idea that there are no unimportant details . . . these are the things which make glass containers really satisfactory in use. And over the years, these are the things which customers have come to expect from Carr-Lowrey.

Yes, Carr-Lowrey glass containers embody a lot of little things you don't see. But those little things are the reason why Carr-Lowrey has long been the choice of many leading manufacturers of drug, cosmetic, household and food products.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE, MD. • *New York Office:* 500 Fifth Avenue • *Chicago Office:* 1502 Merchandise Mart

GAIR BY AIR

SAVES WEIGHT—SAVES SPACE
SAVES PACKAGING COSTS

To the land of the Totem Poles — flying time's from dawn to dusk. Because weight is a first consideration Gair containers and corrugated boxes play a vital part in overland and overseas shipping now and for the future. Gair by Air means maximum cargo at minimum tonnage. Write for bookler "Air Cargoes."

For large users—booklet on the Palletized Load, illustrated with official photographs.

SAVE WASTE PAPER FOR WAR PRODUCTION

ROBERT GAIR COMPANY, INC., NEW YORK • GAIR COMPANY CANADA LIMITED, TORONTO
Folding Cartons • Box Boards • Fibre and Corrugated Shipping Containers

LOOKING INTO THE FUTURE

When you think of bottles think of

Swindell

Machine made and hand made glass containers for cosmetics, drugs and beverages.

SWINDELL BROTHERS, Inc. BALTIMORE, MARYLAND

200 FIFTH AVENUE, NEW YORK ROBERTO ORTIZ—HAVANA, CUBA

STAINLESS STEEL MIXING *and* STORAGE TANKS

Depend on San-I-Tanks for safe handling of all your liquids and chemical preparations. The ideal tank for storage, mixing or processing purposes. Built by tank specialists, San-I-Tanks incorporate every time saving, money saving feature. For special tank adaptations consult our engineers for their recommendations, no obligations, of course.

A typical installation of a group of TYPE "K" TANKS

√CHECK THESE PRODUCTION and EFFICIENCY INCREASING FEATURES

Fabricated throughout of 18-8 Stainless Steel, No. 4 polish on inside, bright finish outside. San-I-Tanks are built to last.

All inside welds are ground smooth and polished. San-I-Tanks are built right throughout.

San-I-Tanks incorporate special self-draining features with specially formed bottoms sloping to the front.

San-I-Tanks are rust-resistant, easy to keep clean and sanitary because of their Stainless Steel construction.

Many special extras available in stock for San-I-Tanks such as covers, motors, agitators, etc.

Built by craftsmen with years of tank building experience—you are assured of years of trouble free, efficient service when you insist on San-I-Tanks.

METAL-GLASS PRODUCTS CO. Dept. D Belding, Mich.

Immediate Delivery --- CAPS

500,000—8mm Black
100,000—8mm Peach
250,000—10mm Black
100,000—10mm Peach
100,000—10mm Red
200,000—13mm Black, Red, Ivory
250,000—13mm With Wells, Black & Colors
250,000—15mm With Wells, Black & Colors
250,000—20mm 410-(Medium, Red)
18, 20, 22, 24, 28,—Regular, Medium or Tall
30, 33, 38, 45, 48,—Regular, Black—large quantities

We also buy any lots of bottles and bottle caps, any size — any quantity. We have many bottles in stock for Cosmetics, Food, Drugs and Chemicals. Your inquiry will receive prompt attention.

Glass Container & Cap Outlet Co.
876 Broadway *New York 3, N. Y.*

SHEET METAL GOODS
SPRINKLER TOPS
CORK TOPS DOSE CAPS

CONSOLIDATED FRUIT JAR COMPANY
NEW BRUNSWICK, N. J.

TRUTH ABOUT COSMETICS

By

Everett G. McDonough, Ph.D.

A searching and critical analysis of cosmetics and cosmetic action. A discussion of every type of cosmetic, their chemical character, their use and established cosmetic value. You must get this book!

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Not quite this simple —

FOR FOLDING CARTON BUYERS WHO DELAY THEIR POSTWAR PACKAGE PLANNING

IT would be fine . . . if you could wait until the last minute . . . press a button . . . and, next morning, have your product, in its new postwar package, on shelves and counters all over the country.

But you know that it takes time to develop and perfect the package that's going to give your product a competitive advantage. And you know that the right time to begin is now—before Gardner-Richardson specialists are snowed under.

Right now's the time to get started on restyling, redesigning. Now's the time to look into more economical set-up and assembly, more efficient folding and sealing . . . better usage qualities, better production.

Press a button, call in your secretary . . . get off a letter today telling us *your* problem. Right now, it will get the kind of action we *like* to give.

GARDNER-RICHARDSON EXPERIENCE and "know-how" have produced many new and revolutionary developments in folding cartons in the past few years. While, at present, our production is completely sold up, our creative and technical staffs are ready to put their skill, experience and new approaches to work on your postwar package problems.

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard, MIDDLETOWN, OHIO

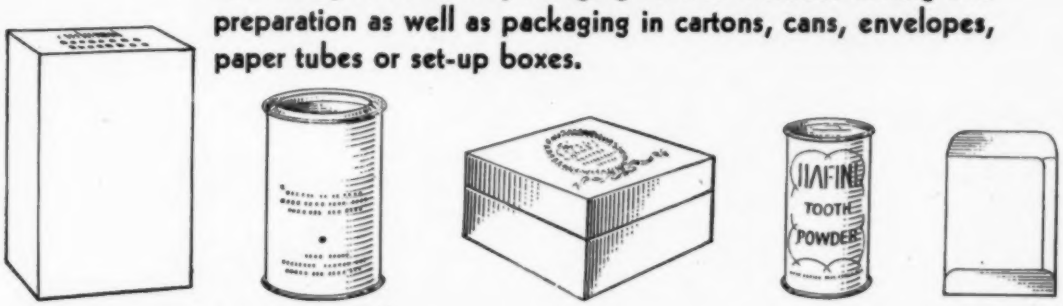
Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT

Rose Attar #244
A REPLACEMENT
NOT A SUBSTITUTE
The perfumer who uses Attar of Rose in his compositions will find that Rose Attar #244 faithfully produces the desired note. Here indeed is a triumph of the perfumer's art . . . Another notable achievement in synthesis which contributes to the distinction of Felton Perfumes.
We will be pleased to send you a sample of
Rose Attar #244 . . . Trial Ounce . . . $3.00
Felton Chemical Co., Inc.
509 JOHNSON AVE., BROOKLYN, N.Y.
Branches in Boston • Philadelphia • San Francisco • Los Angeles
St. Louis • Chicago • New Orleans • Montreal • Toronto • Mexico City
FELTON
Quality
MANUFACTURERS OF PERFUMES, AROMATIC CHEMICALS, ESSENTIAL OILS AND FLAVORS

Yes Sir!
We Can Package Them For You

Open capacity now available on High Speed Automatic Machinery for packaging dry powders - drugs - cosmetics - chemicals.

Our complete custom packaging service includes mixing and preparation as well as packaging in cartons, cans, envelopes, paper tubes or set-up boxes.



The Stevens-Wiley Manufacturing Co., Inc.

Hancock, Palethorp & W. Berks Streets, Philadelphia 22, Pa.

Phones—Regent 1616-1617

BRIDGEPORT...

For the past two years our facilities have been devoted almost exclusively to the production of war materials. We have been fortunate, in that we have been able to handle this work on the same equipment used for our regular peace time products, and, consequently, when material again becomes available for lipstick containers, vanity cases and other metal cosmetic items we will be prepared to start producing our regular line immediately. If you too are planning your post war program, we will be glad to assist you.

THE *BRIDGEPORT* METAL GOODS MFG. CO.

Established 1909

BRIDGEPORT *PHONE: BRIDGEPORT 3-3125 CONNECTICUT

VANITY CASES • ROUGE CASES • PASTE ROUGE CONTAINERS • LIPSTICK HOLDERS (ALL TYPES) • POWDER BOX COVERS • EYEBROW PENCIL HOLDERS • BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO ORDER

Looking at a flower through X-ray eyes—

As the X ray penetrates to and through the heart of a fragile flower, just so are the deft skills and the long experience of Dow technicians applied in seeking out the very essence of floral beauty for many aromatic chemicals.

SYNTHETIC

AROMATICS

DOW

CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

NEWS...

Thomas Returns for Consultation

H. Gregory Thomas, formerly vice-president of Bourjois, Inc., who is working for the State Department in Europe, was in this country last month for con-

H. GREGORY THOMAS

sultation. He has since returned to Europe to resume his duties as assistant to the American Ambassador at Madrid and the American Ambassador at Lisbon.

Compagnie Duval Moves

Compagnie Duval, division of S. B. Penick & Co., has moved its laboratories and offices to new headquarters at 50 Church St., New York 7. The new telephone number is COrtland 7-1970.

Brannon & Carson Bought by McKesson

The business and name of the Brannon & Carson Co., 85-year old drug firm of Columbus, Ga., have been acquired by McKesson & Robbins, Inc., and will be operated as the Brannon & Carson Division. H. E. Weathers, president of the firm for the past thirty years, will be retained in a consulting capacity.

This becomes the sixty-sixth wholesale drug unit in the McKesson organization which covers mainland United States and the Hawaiian Islands, and part of the company's South Atlantic District of which J. D. Crump, of Macon, Ga., is regional vice-president.

Stearns Plant Being Renovated

A plant renovation program, including extensive expansion of the research laboratories, is under way in Detroit, at the Frederick Stearns & Co., Division, Sterling Drug Inc. New Chemical, biochemical, physiological. bacteriological and pharmacological laboratories are being added to the division's already extensive research facilities.

Lueders Appointments

After January 1, Monroe John Myers will represent George Lueders & Co. in St. Louis, succeeding J. C. Weiler who has been the company's representative there for several years.

The appointment of John A. Hughes, 1008 West 53 St., Los Angeles 37, has also been announced. He will represent the company in that city.

Kern Joins I.V.C.

C. J. Kern has joined International Vitamin Corp. as chief chemist, it has been announced by E. Russell Dyer, vice-president.

Mr. Kern attended the University of New Mexico and Union College and was graduated from Polytechnic Institute, Brooklyn. He comes to International Vitamin Corp. from R. H. Macy & Co. where he was chief chemist of the manufacturing division, drugs and cosmetics. Previous to that he had been chief chemist of the Kolynos Co., and chief chemist in the pharmaceutical ampoul division of Lex Laboratories. At present he is located at 8448—129th St., Richmond Hill, N. Y., but in a few months will transfer his activities to the plant at 1 Main St., Brooklyn.

Alter Joins Houbigant

Arthur G. Alter, for the past seven years merchandising manager of Revlon Products Corp., has joined Houbigant Sales Corp. as director of purchases. In his new post, Mr. Alter will supervise the conception, creation and purchase of all packages, display materials, etc. for the Houbigant and Cheramy lines.

Plaque to R. D. Keim

R. D. Keim, vice-president of E. R. Squibb & Sons. New York, has been given a plaque by the National Federation of Sales Executives. The award was made in recognition of Mr. Keim's services in the early organizational work of the association.

Ladewig—Bristol-Myers V.P.

Edward G. Ladewig has been elected an officer of Bristol-Myers Co., New York, with the title of assistant vice-president. He joined the company in January 1944 as assistant to the vice-president in charge of export.

EDWARD G. LADEWIG

A native of California, Mr. Ladewig has made six voyages around the world. For a number of years he lived in Colombia and in Brazil and traveled extensively over the rest of Latin America.

Major Tiller Joins Winthrop

Major Lawrence Tiller, formerly of the Chemical Warfare service of the U. S. Army, has been appointed executive assistant to the president of Winthrop Chemical Co., Inc., New York and Rensselaer, N. Y., it has been announced by Dr. Theodore G. Klumpp, president. Major Tiller will make his headquarters at the company's main offices in New York.

Prior to entering the army two years ago, Major Tiller had been associated with Winthrop for nine years, first as a field and hospital representative, and for the last five years as divisional manager in Atlanta, Ga.

Jefferson Chemical Co.

The Jefferson Chemical Co., Inc., has been organized by the Texas Co. and the American Cyanamid Co. for the manufacture of chemicals from petroleum. Plants will be erected by the company adjacent to various large refineries of the Texas Co.

Ingram & Bell Advances Eagles

C. C. White, president of Ingram & Bell, Ltd., Toronto, Canada, has announced that W. E. Eagles has been appointed general sales manager of the company. Mr. Eagles, who assumed his new duties November 1, was graduated from the Ontario College of Pharmacy in 1916 and has been in the company's

W. E. EAGLES

employ for the past eighteen years, for the last eight years he has been professional service representative in southwestern Ontario.

A pension and retirement plan for all employees who have been with Ingram & Bell for five years or more was put into effect November 1. At the meeting at which Mr. White announced the plan the Flag of the Seventh Victory Loan was also presented to the employees in recognition of their record of purchasing bonds in the Seventh Victory Loan Campaign.

Continental Can Moves in Chicago

Continental Can Company's central division office in Chicago has been moved to the Field Building, 135 South La Salle St., that city, it has been announced by R. L. Perin, general sales manager of the central division. The new office will be headquarters for both packers' cans and general line sales departments.

Dr. Van Meter Joins Reed & Carnrick

Reed & Carnrick, Jersey City, N. J., has announced the appointment of Dr. Clarence Taylor Van Meter, assistant professor of chemistry and physics in the University of Pittsburgh College of Pharmacy, as scientific director. Dr. Van Meter holds the degrees of Ph.S., B.S., and Ph.D. from the University of Pittsburgh, and has been connected with the faculty of the institution since 1926.

Bernard Jeffs, sales manager, has been made director of sales and advertising.

McKesson Buys W. J. Gilmore

McKesson & Robbins, Inc., announced November 30, that it had agreed to purchase the assets of the W. J. Gilmore Drug Co., Pittsburgh, for cash.

The W. J. Gilmore Drug Co. is the oldest wholesale drug firm in Pittsburgh, having been founded in 1825 as MacKeown Thompson & Co. The change in name was made in 1886 and the firm was incorporated in 1904.

James I. Freeman, who has been president of the Pittsburgh company since 1940, will continue as the chief executive. A. L. Sichelstiel, a son of one of the original partners forming the Gilmore firm in 1886, is vice-president and treasurer. L. H. Sichelstiel, a brother, was elected a vice-president in 1921 and secretary in 1940.

Winthrop "President's Award"

Edgar W. Kivela, of Montour Falls, N. Y., a laboratory assistant, and Irwin S. Shupe, of East Greenbush, N. Y., assistant director of control of the Winthrop Chemical Co., Inc., Rensselaer, N. Y., were given "The President's Award" for 1944 by Dr. Theodore G. Klumpp, president, for their "presence of mind and prompt action" which saved the life of Mrs. Helen Wozniak of Albany in a plant accident last summer.

The presentation took place at the DeWitt Clinton Hotel, Albany, at the first dinner meeting of the company's newly organized Twenty-Five Year Club. Mrs. Wozniak, now fully recovered, was also present. It was during an experiment on July 7 in one of the research laboratories that a small flash exploded and a piece of glass struck Mrs. Wozniak in the neck completely severing the carotoid artery and rupturing the jugular vein. Mr. Kivela and Mr. Shupe, recognizing the seriousness of the wound immediately applied pressure to the blood vessels until medical help could be obtained.

The President's Award, which will be bestowed annually hereafter, consisted of appropriately engraved gold watches. Mr. Kivela and Mr. Shupe, the first recipients, have been associated with Winthrop since March 1944, and February 1943 respectively.

A total of 31 men and women became members of the Winthrop Twenty-Five Year Club at the dinner. Isaiah K. Stafford, who first became associated with a predecessor company in 1884, is the oldest man in point of service on the payroll. Alice S. Beebe has been continuously employed for 41 years.

Houbigant Appeal Denied

The Supreme Court of the United States has denied Houbigant's appeal from a decision of the United States Court of Appeals for the Second Circuit which upheld orders of the Federal Trade Commission which directed the company to cease using its trade name in such a way as to lead purchasers to believe that its products were manufactured in France. The commission had complained of the use of "Houbigant-Paris-New York" without stating specifically on the labels that the products were made in the United States.

Bonyun Vice-President

William Bonyun, formerly sales manager of Daggett & Ramsdell, has been appointed vice-president and general manager of that company. In his new position he will not only continue to direct sales and merchandising policies, but will also be responsible for increasing manufacturing and product development activities. He is well known in the industry, having been active in the manufacture and sale of cosmetics since 1922. Previous to that, a graduate of McGill University, he was identified with various engineering projects in the United States and Canada. In 1934, he joined Daggett & Ramsdell as New

WILLIAM BONYUN

York representative, and in 1935 was appointed sales manager.

The years immediately following were given to a gradual overhauling of sales and merchandising policies as the line was repackaged and expanded, and by 1939 an aggressive sales campaign was initiated based upon these new policies. Mountain Heather was introduced in 1941 and, with the announcement of Mr. Bonyun's appointment, the company also announces that new products and packages have been prepared and advertising plans are under way for an enlarged program carrying into the postwar period.

POTASSIUM THIOCYANATE NF

now available! *

Baker's

CHEMICAL FORMULA: . . KSCN

DESCRIPTION: . . . . Colorless, transparent, hygroscopic crystals, odorless and having a saline taste.

ASSAY: . . . . . 99% +

SOLUBILITY: . . . . . 1 gram soluble in .5 cc water at 25° C
1 gram soluble in 12 cc alcohol at 25° C

SPECIAL CHARACTERISTICS: A product of synthesis—with unusually low indices of arsenic, heavy metal and iron impurities.

MEDICINAL USE: . . . . In arterial hypertension

* **AVAILABILITY:** . . . . Pharmaceutical manufacturers will be interested in knowing that we have completed new plant facilities, sufficient for the requirements of the medicinal trade. Potassium Thiocyanate is being synthesized from abundant raw material. We are completely removed from any dependence on the raw material which has previously limited productive capacity. The finished material meets the most exacting standards.

PACKAGES AND PRICE RANGE: . . . .

Barrels containing 225 lbs.	$.65 per lb.
5 barrel lots	.62 per lb.
Kegs containing 100 lbs.	.70 per lb.
Kegs containing 50 lbs.	.74 per lb.
Kegs containing 25 lbs.	.78 per lb.

F.O.B. Phillipsburg, New York or Philadelphia.

A test sample will be mailed upon request.

J. T. Baker Chemical Co., *Executive Offices and Plant:* Phillipsburg, N. J.

also available

- Potassium Thiocyanate CP
- Potassium Thiocyanate Technical
- Ammonium Thiocyanate CP
- Ammonium Thiocyanate Purified
- Ammonium Thiocyanate Technical
- Ammonium Thiocyanate Crude

Baker's fine chemicals

Ammonium Thioglycollate

by SUMMIT

SUMMIT CHEMICAL PRODUCTS CORPORATION is the oldest and largest manufacturer of Ammonium Thioglycollate. Summit developed Ammonium Thioglycollate from a laboratory curiosity into a commercial product that is the basis of the most successful and the most widely used cold permanent wave solutions.

Ammonium Thioglycollate by Summit is manufactured in a large and modernly equipped plant. Its unvarying high quality reflects the rigid and exacting scientific control of each step in its manufacture. Its reasonable price reflects the concomitant economies of large-scale production. Its preference by the leading manufacturers of cold permanent wave solutions reflect its

1...UNIFORMITY
2...STABILITY
3...PURITY
4...FREEDOM FROM IRON
5...FREEDOM FROM BY-ODORS

Ammonium Thioglycollate by Summit makes for definitely better cold wave.

Inquiries Solicited

SUMMIT

CHEMICAL PRODUCTS CORPORATION

MAIN AND WILLIAM STREETS • BELLEVILLE 9, N. J.

Revson Resumes Duties

Joseph Revson has resumed his duties as general manager and treasurer of Revlon Products Corp., New York, after receiving a medical discharge from the Army of the United States, in which he served for twenty-nine months.

Hema Drug Appoints Slam

Hema Drug Co., Inc., Maspeth, N. Y. has announced the appointment of Leo Slam, formerly of the Retort Pharmaceutical Co., as sales manager. Mr. Slam has spent over twelve years in the drug industry. At Hema he will give special attention to the merchandising of hormones and other chemicals. He has already installed a service to ampule manufacturers, whereby they can purchase injectible solutions, already prepared for ampuling, or vialing, and sterilization.

Assoc. Distributors Appoints Fenlon

Lewis J. Ruskin, president of Associated Distributors, Inc., has announced the appointment of John J. Fenlon as New York representative. Mr. Fenlon has been with Lucien Lelong, Inc. for the past nine years.

Robot Bomb Propellent by Monsanto

Plans for the manufacture of a launching propellent for American models of the robot bomb by Monsanto Chemical Co. have been announced by Monsanto officials and the Army Air Forces Technical Service Command, Wright Field, Dayton, Ohio.

Liberty Freighter "Dr. Edward R. Squibb"

A 10,500-ton Liberty freighter was christened "Dr. Edward R. Squibb" in honor of the man who was instrumental in organizing the U. S. Navy's first medical laboratory, and launched at Brunswick, Ga., November 9. On the launching platform were Mr. and Mrs. George Squibb of New York. Mr. Squibb is a great-grandson of Dr. Squibb, and is associated in the drug firm which bears its founder's name.

Dr. Squibb was commissioned Assistant Surgeon in the U. S. Navy in 1847. After four years of sea duty, he was assigned to the Naval Hospital in Brooklyn, in 1851, where he began his career as a manufacturer, pharmacist, and chemist. He won fame in 1861 when his laboratory became the chief source of medical supply for the Army and Navy during the Civil War.

T.G.A. Staff Appointments

S. L. Mayham, formerly executive secretary of The Toilet Goods Assn., Inc., is now executive vice-president. The executive board at its November meeting decided that in view of the growing size of the Association, its increased importance, and its many

S. L. MAYHAM

functions, it would be appropriate to make this change in title. In view of the far-reaching research program which will be announced, H. D. Goulden's title was changed from director of the Board of Standards to director of Scientific Research and Standards. A new position, assistant secretary, was created, which will be occupied by Henry Etsch, who has been on the staff at headquarters for ten years.

Another Sheffield Grandson

W. Kyle Sheffield, vice-president of New England Collapsible Tube Co., has announced that he has again become a grandfather. Peter Kyle Sheffield the Second, the son of Captain and Mrs. Peter Kyle Sheffield, was born November 2 at Independence, Kansas where his father is on duty with the Army Air Force as Air Inspector in Kansas.

The baby, who weighed seven pounds, five ounces, is Mr. Sheffield's third grandchild.

Sachs' 25th Wedding Anniversary

Mr. and Mrs. Arthur Sachs of the cosmetic firm, Eugenia Sachs, Naples, Me., have been celebrating the twenty-fifth anniversary of their marriage.

BIMS Annual Dinner

The BIMS will hold its annual dinner as usual the fourth Thursday in January, January 25, at the Hotel Lafayette, New York. Martin F. Schultes is chairman of the executive committee of the BIMS.

Hilfer Joins Associated Distributors

Harry Hilfer has been appointed chief chemist of Associated Distributors, Inc., Chicago. He was formerly associated with Lehn & Fink Products Corp., Bloomfield, N. J., and previous to that was for several years with Evans Chemetics Inc.

Another Son to the Kellys

Joseph F. Kelly of Hagerty Bros. & Co., and Mrs. Kelly have announced the birth of a son, Paul, November 18. They already have two other sons, Joe aged 6 and Charles aged five.

Lueders Honors Rosa Kroog

A dinner in honor of Miss Rosa Kroog was given at the Hotel Astor, New York, November 10, by George Lueders & Co. The occasion was the fiftieth anniversary of Miss Kroog's association with the company. During the greater part of this time she has been the active head of the invoicing department, a position which she holds at the present time.

Frederick J. Lueders, president, presented a diamond pin and a check to Miss Kroog; the employees gave her an alligator handbag and the factory employees a corde bag.

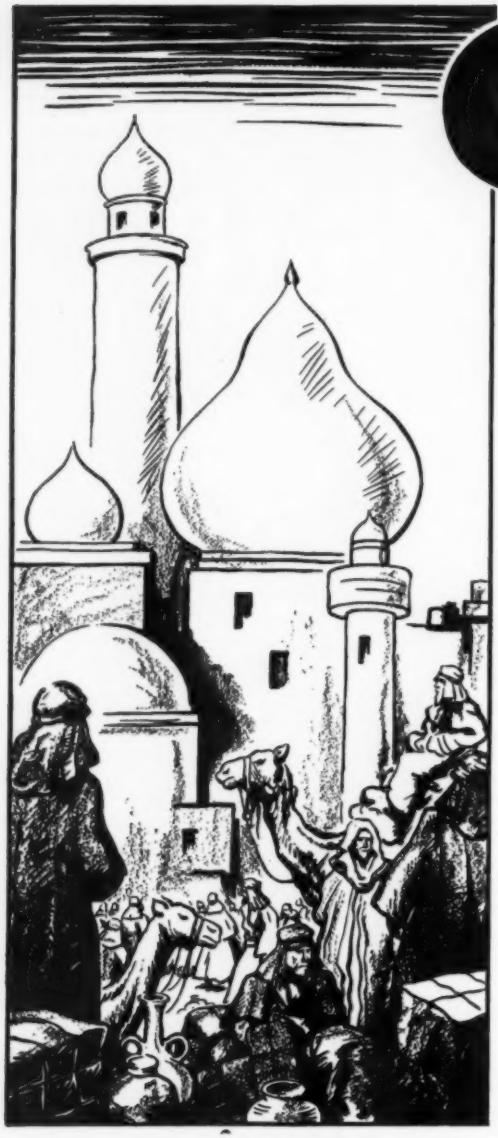
Edward V. Killeen acted as toastmaster.

Mallinckrodt Organic Products

Mallinckrodt Chemical Works, which has hitherto devoted itself largely to the production of fine chemicals, has developed a line of new organic products with which the company expects to enter the fine industrial chemical field.

Among them is a new line of organic carbonates which range from mobile, low boiling liquids to crystalline solids and waxes. The lower members of the Mallinckrodt alkyl carbonate series are said to be volatile, colorless liquids, readily soluble in most organic solvents and are excellent solvents for many organic compounds. Possible uses as perfume components are indicated for diamyl carbonate, dicyclohexyl carbonate and dibenzyl carbonate which have pleasant, fruit odors.

It is said that the Mallinckrodt processes for the first time make it practicable to consider the potential industrial utility of malonic esters and polymeric substances derived from the reaction of organic carbonates with polyfunctional compounds such as amino-alcohols.



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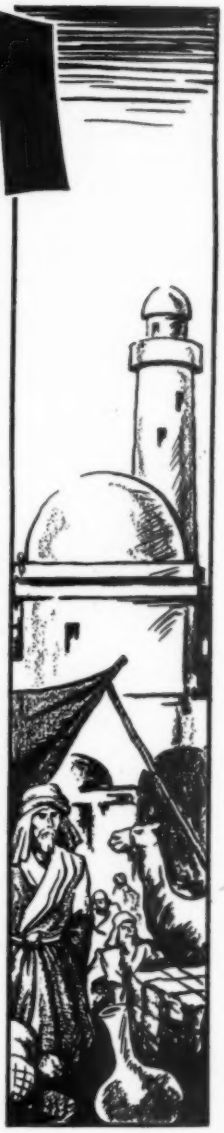

ORBIS GUMS, whole or powdered, are the products of expert experience of forty-four years standing in the selection of fine raw materials and in milling to guarantee complete satisfaction for your most exacting technical requirements.

ORBIS GUMS can be obtained in any mesh from the finest powder to the various granular forms used to a great extent in the drug field—ground in our modern mill at Newark, New Jersey.

ORBIS KARAYA GUM in fine powdered form is specially adaptable for "Wave Sets."

Please let us know your requirements. Working samples upon request.

ORBIS
PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK · FACTORY & LABORATORY, NEWARK, N.J.

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Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss

Proprietary Scientific Meeting

The Scientific Section of the Proprietary Association held its mid-year meeting at the Biltmore Hotel, New York, December 6. Addresses scheduled included: "Uterine Depressants II—Further Studies on Aletris Farinosa and Chamaelirium Luteum (Helonias)," by C. L. Butler and C. H. Costello, Lydia E. Pinkham Medicine Co., Lynn, Mass.; "Succinchlorimide as a Water Decontaminant," by G. F. Reddish, chief bacteriologist, Lambert Pharmacal Co., St. Louis; "The Antibacterial Principle of Allium Sativum," by C. J. Cavallito and John Hays Bailey, Winthrop Chemical Co., Inc., Rensselaer, N. Y.; "An Analysis of Consumer Complaints," by D. F. Nealon, vice-president, National Toilet Co., Paris, Tenn.; "The Action of Some Laxative Drugs in the Smaller Animals," by I. W. Grote, the Chattanooga Medicine Co., Chattanooga; "Aluminum in the Packaging of Drugs," by D. B. Strohm, Packaging Laboratory Aluminum Co. of America, Edgewater, N. J.; "Supplements of the U. S. Pharmacopoeia and National Formulary, British Pharmacopoeia, and British Pharmaceutical Codex—a Review," by Louis M. Roeg, Merck & Co., Inc., Rahway, N. J.; "The Function of a Commercial Experimental Station as an Agricultural Pilot Plant," by J. W. Copley, S. B. Penick & Co., New York; and "Developments and Trends Affecting the Marketing of Medicinal Products," by Paul W. Spickard, United Drug Co., Boston.

Schwab—Heyden Treasurer

B. R. Armour, president of Heyden Chemical Corp., has announced the election of George B. Schwab as treasurer and director of the corporation. For the past seven years Mr. Schwab has been treasurer and director of the Aspinook Corp., Jewett City, Conn., dyers and finishers of textiles.

Upjohn Awarded "E"

The Army-Navy "E" was given to the employees of the Upjohn Co., Kalamazoo, at appropriate ceremonies held November 24.

Sullivan Sells Dresden Interest

Eugene P. Sullivan has announced that he has disposed of his interest in the Dresden Cosmetic Co. Mr. Sullivan will take a short rest before announcing his future plans.

Edward S. Burke Moves

Edward S. Burke, representing Carus Chemical Co., Inc., and Benzol Products Co., has moved to new offices at 65 Pine St., New York 5.

Calif. Cosmetic Meeting

A meeting of the associate members of the California Cosmetic Association was held at luncheon at Lindy's Los Angeles, October 31. Leonard Katz, vice-president of Florasynth Laboratories, Inc., and chairman of the associate members., presided.

George A. Moulton, president American Pharmaceutical Association; E. Walton Bobst, chairman of the National Pharmacy Committee on Public Information; and Dr. Ivor Griffith, past president of the American Pharmaceutical Association, discuss pharmacy's public relations problems.

T.G.A. Research Committee

A Research Advisory Committee has been appointed by the Toilet Goods Association to direct the research program recently authorized by the executive board. The committee consists of: J. H. McShane, Pacquin, Inc., chairman; W. M. Bristol, Jr., Bristol-Myers Co.; P. H. Douglas, Bourjois, Inc.; Dr. H. O. Hartfiel, Hudnut Sales Co., Inc.; Dr. Walter Langer, Dr. Langer Co.; Dr. E. C. McDonough, Evans Chemetics, Inc.; Dr. E. C. Merrill, United Drug Co.; E. P. Morrish, Affiliated Products, Inc.; Dr. K. L. Russell, Colgate-Palmolive-Peet Co.; Cecil Smith, Yardley of London, Inc.; Dr. M. W. Tapley, Sterling Drug, Inc.; Northam Warren, Northam Warren Corp.; J. S. Norton, Lambert Pharmacal Co.. J. M. Williams, Allied Products, Inc.

H. D. Goulden, director of scientific research and standards of the T. G. A. is secretary of the committee. H. L. Brooks, president of the association, and S. L. Mayham, executive vice-president, are ex officio members.

Treatment of War Veterans

Plans for a nation-wide educational campaign offering U. S. civilians guidance on the treatment to be accorded returning war veterans were presented by the War Advertising Council at a meeting of 150 business leaders held under the auspices of the Drug, Cosmetic and Allied Industries Committee, at the Ritz-Carlton Hotel, New York, November 14.

The program endorsed by the Army, Navy, Retraining and Rehabilitation Administration and other government agencies, involves an extensive advertising schedule contributed by members of the drug, cosmetic and allied industries as their third joint wartime advertising effort.

The new veterans' campaign has already been approved by the policy committee which is comprised of Lee H. Bristol, Bristol-Myers Co., chairman; Robert B. Brown, Bristol-Myers Co., vice-chairman C. S. Beardsley, Miles Laboratories, Inc.; E. Walton Bobst, Hoffmann-LaRoche, Inc.; H. L. Brooks, Coty, Inc.; Alvin Brush, American Home Products, Inc.; James J. Hill, Jr., Sterling Drug, Inc.; John L. Johnston, Lambert Co.; Charles Luckman, Pepsodent Co.; Robert E. Healy, Colgate-Palmolive-Peet Co.; William Y. Preyer, Vick Chemical Co.; M. M. Sterling, E. Fougera & Co.; Harold B. Thomas, Centaur Co., Div.; and J. T. Woodside, Weco Products Co.

Willard Heads Whitehall Sales

Chester C. Willard has been named merchandising manager of Whitehall Pharmacal Co., a division of American Home Products Corp.

C. C. WILLARD

Whitehall, a combination of the Anacin, BiSoDol, Kolynos and Larned companies was formed in September. Previous to his new appointment, Mr. Willard was merchandise director of the Anacin and Larned units.

A.P.M.A. Midyear Meeting

The American Pharmaceutical Manufacturers' Association held its midyear meeting at the Waldorf-Astoria, New York, December 11 and 12. The ceremony in connection with the presentation of the Sixth Annual Scientific Award took place the first day. The award is made on nomination of a scientific advisory committee including Dr. George R. Cowgill, chairman, professor of nutrition at Yale University; and Dr. Howard B. Lewis, professor of biological chemistry in the Medical School and Director of the College of Pharmacy at the University of Michigan. In 1939 the award was presented to Dr. Nathan B. Eddy and Dr. Lyndon F. Small, jointly, for scientific studies of morphine derivatives; in 1940 to Dr. Perrin H. Long, for scientific studies of sulfa drugs; in 1941 to Dr. Tom D. Spies, for scientific studies of vitamin B complex; in 1942 to Dr. Edward A. Doisy, for discovery and scientific studies in the hormone field; and in 1943 to Dr. Alexander Fleming and Dr. Howard W. Florey, jointly, for discovery and scientific studies of penicillin.

Charles Wesley Dunn, general counsel for the association, presided at the ceremony this year when the award was presented to the National Research Council, for its services to the country in the field of the medical sciences, in war and peace-time. The first part of the program was devoted to "Some Fundamental Trends in Chemotherapy for Progress in Medicine." Twenty-minute addresses were given by: Dr. John S. Lundy, professor of anesthesiology, Mayo Foundation, Graduate School of the University of Minnesota; member of the subcommittee on anesthesia, division of medical sciences, National Research Council—"Progress in Conquest of Pain by Anesthesiology;" Dr. Chester S. Keefer, Wade professor of medicine, School of Medicine, Boston University, chairman of committee on chemotherapeutic and other agents, division of medical sciences, National Research Council—"Progress in Conquest of Bacteria by New Medicinal Agents;" Dr. William C. Rose, professor of biochemistry, University of Illinois, Chairman of committee on protein foods, food and nutrition board, National Research Council—"Progress in Conquest of Malnutrition by Amino Acids;" Dr. Edwin J. Cohn, professor of biological chemistry, Medical School, Harvard University, member of committee on chemistry of proteins and of subcommittee on blood substitutes, division of medical sciences, National Research Council—"Progress in Conquest of our Knowledge of Blood Proteins and of Their Therapeutic Value;" and Dr. Wendell M. Stanley, member of the Rockefeller Institute for Medical Research, Princeton, N. J., member-at-large of the executive board of the National Research Council—"Progress in Conquest of Virus Diseases."

The second part of the meeting was devoted to the presentation and acceptance of the award. The nominating report was made by Dr. George R. Cowgill and the presentation address by Dr. Alan Gregg, director of medical sciences, Rockefeller Foundation. His subject was "The Essential Need of Fundamental Research in Medical Sciences for Social Progress." Dr. Ross G. Harrison, chairman of the National Research Council accepted the award and spoke on "National Research Council and Its Action in Field of Medical Sciences." Concluding statements were made by Dr. Frank B. Jewett, president of the National Academy of Sciences.

The program for the public session of the midyear meeting, held on December 12, was divided in two parts. Part I dealt with major post-war problems. Addresses were given by Hon. Hatton W. Sumners, chairman of House Judiciary Committee—"Our Traditional Balance of Federal and State Government: We Must Maintain It in the Post-war Period;" Dr. Sumner H. Slichter, Lamont professor of economics at Harvard University—"Post-war Jobs, Taxes and Debt;" William M. Robbins, vice-presiden , General Foods, Corp.—"The Social Responsibility of Industry in the Post-war Period;" and Charles Wesley Dunn—"The Sherman Antitrust Act: Its Fundamental Significance in the Post-war Period."

The second part of the program was devoted to the Pacific War.

Fitch Gift to Drake U.

The F. W. Fitch Co. has made a gift of $100,000 to Drake University, Des Moines, for the erection of a modern, well-equipped pharmacy building. The building will be constructed as soon as conditions permit.

F. W. FITCH

National Vitamin Foundation

S. DeWitt Clough, president of Abbott Laboratories, called a general meeting of the vitamin industry early in December to consider a plan for the formation of the Vitamin Foundation. It was proposed that there should be four classifications of members—manufacturers whose vitamin products are promoted primarily to the professions; those whose products are advertised direct to the consumer; basic producers who supply bulk vitamin materials to manufacturers and distributors and honorary, those individuals admitted because of their scientific achievement in the vitamin field.

The organization committee was composed of: chairman, Charles L. Bowman, Charles L. Bowman & Co., New York; William H. Berg, the Borden Co., New York; Elmer H. Bobst; J. O. Brownell, Lever Brothers, Cambridge; James J. Kerrigan, Merck & Co., Rahway, N. J.; John H. Toohy, E. R. Squibb & Sons, New York; Gerald L. Smith, Gelatin Products Co., Detroit, and W. L. Finger, Standard Brands, Inc., New York.

CREATIVE ORIGINALITY

is the keynote of odor appeal for your gigantic,

ultra-modern post-war market . . . Let

ALBERT **Verley** & COMPANY

help you draw upon the resources

of MODERN CREATIVE AROMATICS

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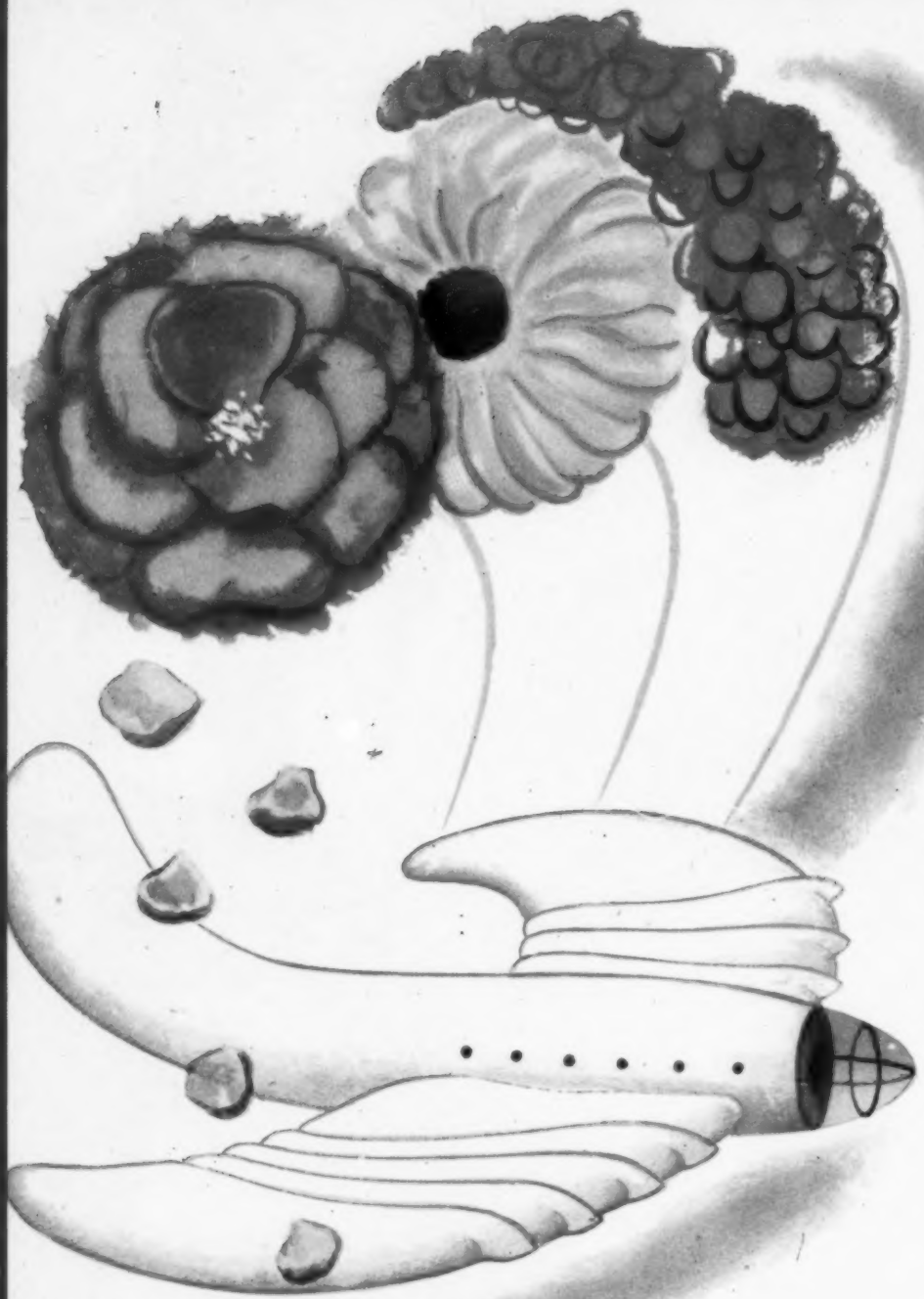

IT'S AMERICA'S TURN [*and yours*]

to enjoy the flattery of attempted imitation

Let modern creative aromatics by Albert Verley & Company help you match the creative pace of your thrilling packages and presentation

There was a time, to be perfectly frank, when skill in imitating European successes was thought to be the measure of the American perfumer's ability.

Through history's greatest upheaval, the opportunity for creative leadership has crossed the Atlantic to our own shores. Whether we shall hold that leadership—in the face of the greatest market opportunity the world has ever seen—is up to us, and to you.

A decade of deliberate preparation has put us in a position where we believe we can help you—with aromatic creations, specialties, and creative suggestions based upon modern creative chemistry.

Even the externals of your product—the packages and other "atmosphere"—take time to perfect. How much more important, then, is adequate time to create the odor without which externals are meaningless—the odor that shall make us the imitated instead of the imitators.

We therefore suggest that you discuss your problems with us at the earliest possible date. Call or write today.

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DCAT Elects

The Drug, Chemical and Allied Trades Section of the New York Board of Trade held its 54th annual meeting and election at the Drug and Chemical Club, November 21, with over 100 executives present

Annual reports were presented by the officers and committee chairmen, including E. T. T. Williams, chairman of the section; Robert B. Magnus, treasurer; Carl M. Anderson, chairman of the legislative committee; Helen L. Booth, acting secretary, and Robert C. Hilldale, Washington representative. Guy L. Marsters, vice-chairman of the section and chairman of the membership committee, reported that a total of 100 new members had been added to the section during the year bring the membership to the all-time high of 514.

John J. Toohy, manager of distribution for E. R. Squibb & Sons, was unanimously elected as the representative of the section to the Board of Directors of the New York Board of Trade. Newly elected members of the executive committee who will serve during the coming year are: Frank G. Fanning, N. I. Malmstrom & Co.; William F. George, Hooker Electrochemical Co.; Harold C. Green, L. Sonneborn Sons, Inc.; Philip B. Hoffman, Ortho Products, Inc.; Joseph F. Kelly, Hagerty Bros. & Co. The following were re-elected to the executive committee: Harold M. Altshul, Ketchum & Co., Inc.; Carl M. Anderson, Merck & Co., Inc., William H. Berg, the Borden Co.; Carle M. Bigelow, Calco Chemical Division, American Cyanamid Co.; Hugh S. Crosson, McKesson & Robbins, Inc.; James DeCesare, White Laboratories, Inc.; Grover C. Hollings, Eli Lilly & Co.; R. J. Ingram, Bristol-Myers Co.; Elvin H. Killheffer, E. I. duPont de Nemours & Co., Inc.; Arthur J. Kinsman, Purepac Corp.; Robert B. Magnus, Magnus, Mabee & Reynard, Inc.; Guy L. Marsters, Norwich Pharmacal Co.; Harold D. Pomeroy, G. S. Stoddard & Co., Inc.; Lloyd I. Volckening, Ivers-Lee Co.; and William J. Weed, Niagara Alkali Co.

Lund Heads College Trustees

Robert L. Lund, executive vice-president of Lambert Pharmacal Co., St. Louis, has been elected chairman of the board of trustees of the St. Louis College of Pharmacy. He succeeds Frederick W. Sultan, who died recently.

Fiedler Visits New York

J. G. Fiedler, U. S. N. R., formerly of Kelton Cosmetics Co., was in New York early in November. He is now a research assistant, stationed at the Medical Field Research Laboratory, Camp Lejeune, N. C.

INTERNATIONAL

John J. Loughlin, who received the first citation for meritorious service to be awarded in the New York War Fund campaign, from Archbishop Francis J. Spellman of New York, presented a photo of Abraham Lincoln's statue to Archbishop Spellman. Mr. Loughlin is a steward at the Chemists' Club.

Frederick C. Theile

Frederick C. Theile, president of P. R. Dreyer, Inc., New York, died at Englewood Hospital, Englewood, N. J., December 3, after a long illness. He was fifty-one years old.

FREDERICK J. THEILE

Mr. Theile, who has been president of Dreyer since 1932, joined the organization in 1925 as vice-president. Prior to that he had been vice-president of Chas. V. Sparhawk & Co.

He is survived by his widow and two sons, Frederick Jr. now in the Navy, and Kenneth, a student at Lehigh University.

Lt. Davis Visits Here

Lieutenant Peter E. Davis, of the Coast Guard and formerly advertising and publicity manager for Ansbacher-Siegle Corp., Rosebank, Staten Island, was in this country this fall after more than a year's duty on a transport which took part in the invasions of Normandy and Southern France.

He was commissioned an ensign in the Coast Guard in September 1942 and was promoted to the rank of full lieutenant this summer.

T.G.A. Convention May 9

The Toilet Goods Association will hold its annual convention May 9, 10, and 11, at the Waldorf-Astoria, New York. The first day will be devoted entirely to a meeting of the Scientific Section and general sessions will begin on May 10.

The committee in charge of arrangements consists of L. R. Root, Scovill Manufacturing Co.; A. C. Burgund, Carr-Lowrey Glass Co.; Charles Fischbeck, the George Uhe Co.; P. E. Haebler, Goldschmidt Corp.; W. E. Klaas, Brass Goods Mfg. Co.; M. Lemmermeyer, Aromatic Products, Inc.; M. F. Martin, U. S. Industrial Chemicals, Inc.; W. P. Murray, Continental Can Co.; Karl Voss, Karl Voss Corp.; and J. Blaine Walker, Hazel Atlas Glass Co.

Leaders Lead Through Service

The clatter of retreating German heels was hardly silent in the Rue de la Paix when French designers popped up with plans and ideas for again establishing Paris as the world's fashion center.

The American designers' present leadership is threatened by the rebirth of "Mademoiselle Modiste".

Though neither your business nor ours is likely to be directly affected by such tremendous trifles as the length of a skirt or the width of a brim, there's a lesson in this for us.

There is no *status quo*. There is no halting place.

We go on or we go back.

We improve our position, or we find ourselves outflanked.

In our case, and I think in yours too, we gain through the service we render the 55,000 druggists who are our readers and your salesmen.

In the November issue of American Druggist you will find many articles which we believe strengthen our position with both you and the druggist.

One in particular will start a lot of discussion. On page 74, Carl W. Dipman, editor of Progressive Grocer, tells some basic facts about the way drugs are being sold in food stores. What he says will not be news to you . . . nor to some druggists.

But it will be important news to many druggists.

Your advertising in American Druggist thus has a substantial, working background of editorial service. When you take advantage of this sensible policy, you are guarding your leadership in the cosmetic field.

PUBLISHER

THE PHARMACEUTICAL BUSINESS MAGAZINE
572 Madison Avenue • New York 22, N. Y.

American Druggist

M. Cortizas & Co. Now Camax Co.

The Camax Company is the new name of M. Cortizas Co., importer of Mexicans, Bourbons and other varieties of vanilla beans. The plant and offices continue at 1316 Arch St., Philadelphia, and the principal owner, who is also the chief source of supply for Mexican vanilla beans, remains the same. Joseph R. Maxwell has been installed as the new president.

Mr. Maxwell is primarily a food technologist and specialist in flavors. He has resigned as chief chemist of Stephen F. Whitman & Sons, confectioners, to head the Camax Co. He had been with the Whitman company for about twenty-five years.

Bayer of Canada Changes

J. C. Creighton has been made sales manager of both Bayer Co. Ltd. and Sterling Products Ltd., Windsor, Ont., it has been announced by Henry L. Schade, president. Mr. Creighton succeeds Ray L. Sperber, who has resigned to join the Vick Chemical Co. in New York in an executive capacity.

Ernest Gater, formerly in the advertising department, has been named advertising manager of Sterling Products and Alex Summers, sales promotion manager.

SKF Defends Patent

Pro-Medico Laboratories and Samuel Heller, Brooklyn, have been adjudged in contempt of court by Judge Robert A. Inch in the U. S. District Court for the Eastern District of New York, for having violated an injunction issued against them by that court in March 1944. Damages amounting to $2,000 were awarded. The injunction was issued as a result of a consent decree which settled a suit brought against them by Smith, Kline & French Laboratories, Philadelphia, for patent infringement and unfair competition. The patent, owned by Smith, Kline & French Laboratories, is on amphetamine sulfate, which they market as "Benzedrine."

Glycerine Booklet

The Glycerine Producers' Association has issued a booklet called "Nothing Takes the Place of Glycerine—1583 Ways to Use It." It declares that no satisfactory substitute has been found for the full range of applications offered by this one product.

Copies may be obtained upon request from the Glycerine Producers' Association, 295 Madison Ave., New York 17.

Nyal 1945 Plans

E. P. Mathiessen, president of Nyal Co., Detroit, has announced that plans for 1945 are being discussed at a series of five important sales meetings in December. The meetings are being held in Chicago, Omaha, San Francisco, Cincinnati and New York.

Allan L. Carter, Sr.

Allan L. Carter, Sr., of the Resinol Co., Baltimore, died at his home in that city November 25. He was seventy-three.

At the time of his death, he was senior member of the firm which he founded many years ago with his brother, the late Dr. Merville H. Carter, and H. F. Dulaney.

Warren Newman Churchill

Warren Newman Churchill, chief executive of the Churchill Drug Division of McKesson & Robbins, Inc., Burlington, Iowa, has died at the age of fifty-two.

WARREN NEWMAN CHURCHILL

His entire business career was identified with the Churchill Drug Co. which he joined on his graduation from the Pomfret School in Connecticut in 1911. He was president of the company when it became a part of McKesson & Robbins, Inc. in 1928.

Lieut. William George Geary

Lieut. William George Geary, former regional vice-president of the South Atlantic District of McKesson & Robbins, Inc., was stricken with meningitis and died at the Chelsea Naval Hospital in Boston, November 27. He had recently been commissioned by the Navy and was assigned to a special training course at Harvard. He was thirty-three years old and had been associated with the McKesson organization since his graduation from Stanford University in 1933. He had been regional vice-president in charge of the South Atlantic District, with headquarters in Atlanta, since 1942.

Adolph C. Schwarz

Adolph C. Schwarz of the chemical department of E. I. du Pont de Nemours & Co., New York, died of a heart attack in Westfield, N. J., November 7, after casting his vote. He was sixty-one years old, and had been with du Pont for forty-one years.

Mr. Schwarz was born in Allentown, Pa., and was first employed by Roessler & Hasslacher Co. which was later merged with E. I. du Pont de Nemours & Co.

Frederick William Sultan

Frederick William Sultan, president of Od Peacock Sultan Co., St. Louis, died at his home in University City, Mo., November 4. He was eighty years old.

Mr. Sultan was born in Baltimore and was graduated from Maryland College of Pharmacy in 1884. In 1891 he organized the Sultan Drug Co. In 1892 he became secretary of the Peacock Chemical Co. and in 1893 he assisted in organizing the Od Chemical Co. of New York. In 1931 the three companies were combined under the name, Od Peacock Sultan Co.

Mr. Sultan was actively associated with the St. Louis College of Pharmacy and had been a member of its board of directors since 1912. He was a member of the American Chemical Society and of the Proprietary Association.

John P. Vickers

John P. Vickers, representative of the Southern Drug Co. Division of McKesson & Robbins, Inc., in the Beaumont, Texas, territory, died following a heart attack on October 29.

He was born at Navasota, Texas, in 1895. With the exception of two years in the United States Navy in World War I, he had spent his working lifetime in the drug industry. He was a registered pharmacist and became associated with the Southern Drug Co., now the Southern Drug Co. Division of McKesson & Robbins, Inc., in 1932.

William C. Watt

William C. Watt, chairman of the board of Liggett Drug Co., Boston, died at Chappaqua, N. Y., November 30. He was sixty years old.

For many years before becoming chairman of the board, Mr. Watt served as executive vice-president of the Liggett company. He was a member of the board of directors of United Drug Co., Boston, and had been a vice-president of that company.

The Why's of Foreign Trade-Marks

(*Continued from page 667*)

where the first user is entitled to exclusive rights:—

England	**Colombia**
Australia	**Iceland**
Canada	**India**
Ceylon	**Iraq**
China	**New Zealand**
	South Africa

GROUP V. The following countries may shortly be open also for such procedure, each being of the same classification as Group IV:—

Belgium	**Italy**
France	**Sweden**
Netherlands	**Switzerland**

Before us now we have five groupings in Group I, II, and IV of which it is possible to proceed now, the others being embraced by your post-war planning, when those countries are open for such procedure as filing trade-mark applications. What then are the governing factors with respect to filing trade-marks abroad?

In one set of circumstances, a concern will have an established market, or representative, as by an agency, or even an actual associated manufacturer or distributor in some foreign country and obviously in such instances the question is easy to answer for that country at least, because unless protection is promptly obtained some unsurmountable hazard may be met. Such may be:—

(a) A representative or agency may register *your* mark in its own name, in Group I and II countries, with or without your implied or real consent, and thereafter upon may cancel the representation contract but not the trade-mark and usually nothing can be done about it. Therefore, unless your contract with the foreign agency is such that no cancellation is possible, keep your trade-marks in your own name.

(b) Again in Groups I and II, unless you are reasonably diligent, some other party than you or your agency in the country concerned may beat you to it with the result that you may have to buy back your own mark.

(c) Some part or all of your trade-mark as registered in the U. S. A. may be offensive to the country you have in mind, such as the use of the word "Royal" in England or other monarchy. Thus, your trade-mark may be refused in the foreign country although acceptable here and the sooner you know that the better.

Where there is a definite foreign country always in mind for your trade-marks due to established commitments, it is wiser before finally approving a proposed mark and before registering here, to place it before competent patent counsel who will be able to determine whether it is suitable also for the foreign registration.

(d) Failure promptly to file your foreign registration and preferably to avail yourself of the priority of the terms of the International Convention where applicable, may result in a third party legitimately filing the same or a confusingly similar mark based on a prior user in the country concerned, which will usually defeat your claim.

It is, however, a simple matter to determine whether or not to file in that country where there is an established or tangible market and the main recommended procedure is diligence.

In a second set of circumstances, however, there is nothing more tangible in mind than a potential market conceived by a progressive concern who realizes that this war will bring in its wake a globe-wide demand for American goods. Soap, shaving supplies, hair preparations and the like are at a premium in most theatres of operation. Ask that boy in uniform! Cosmetics and hair treatments of all kinds, too, as any Wac will testify. And these uniformed salesmen and saleswomen at large will leave behind trade names, trade-marks, and that stamp of quality which is America.

Accordingly, knowing as only you can, where your goods are seeing the world, you can plan what to do, now and later. The hazards given in (a), (c) and (d) above are applicable in this set of circumstances also.

Your goods, exported by you, directly or indirectly may be upon the foreign market and thus some enterprising individual may see the benefit of registering your mark, to your loss. In those countries where the first registrant is not necessarily the owner, but rather the first user, despite your possible earlier use, another party may obtain registration of a similar mark if you have not done so yourself and place the burden of proof of prior use on your shoulders, since it is a well established tenet in most countries that registration of a trade-mark is *prima facie* evidence of the owner's exclusive right to use said mark.

Statistics for many of the countries where present registration is possible are obtainable with respect to your type of product to give you an initial yardstick to guide your initial decision, and the obtaining of a reputable agency or other outlet in the countries selected is not difficult if it is handled in the right manner.

Lend-lease is spreading American goods around, and individual exporting the sort of goods you sell is being done in every overseas gift parcel.

Blanket registration in every possible country which might be involved is not indicated or necessary in the majority of cases, but you do know what you sell; you do know where it's going and it is a simple matter to find out whether economically there may be some possibility of commercial success for you in that country in the formative post-war years.

Many of the Latin American countries have great potentialities as can be seen by their increased financial standing in the world of today while countries like Australia are looking more dominant under American influence.

So, in your post-war planning schemes it would be well to include some place for discussion of this world-wide invasion by American goods and see if you cannot glean something from it into your garner.

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

December ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1944

Aroplaz 1311 Replaces Scarce Alkyds in Baking Finishes

U.S.I. has just announced a new resin, S&W Aroplaz 1311, which promises to help fill the serious current need for a plasticizer resin which can be used in essential civilian bake-coatings to take the place of resins made from highly restricted phthalic anhydride.

Baked enamels, employing vehicles based on urea and melamine-formaldehyde, have outstanding hardness and color retention. Porcelain-like refrigerator finishes so made, for example, are extremely white, and stay that way. They are also very resistant to moisture, chemicals and abrasion though low in gloss characteristics.

Such coatings must be correctly plasticized as well as modified to improve their gloss; otherwise the urea and melamine-formaldehyde finishes would be entirely too brittle, too low in sheen and would have poor adhesion.

For this purpose, properly formulated alkyds perform very well. However, due to the present scarcity of phthalic anhydride, such alkyds are obtainable only for the most important military end uses. As a result, essential civilian requirements for many bake-coatings can not easily be filled.

S&W Aroplaz 1311 fills this gap quite well for many otherwise restricted end uses. Combinations with it do not bake quite as hard as with phthalic alkyds; but they are sufficiently glossy, tough, color-retentive, flexible and adhesive to be entirely suitable for most purposes.

Compatible with Nitrocellulose

S&W Aroplaz 1311 is also freely compatible with nitrocellulose. Therefore, it is useful in lacquer formulation, acting as both a resin and a plasticizer. It is a semi-drying type resin.

Specifications

Solution	59-61% solids in High Solvency Naphtha
Viscosity	S-V
Acid Value of Plastic	25-30
Color (G.H. 1933)	8-10
Wt./gal. at 25° C.	8.2

U.S.I. Announces New, Interesting 48-Page Book

Profusely illustrated with color plates and black and white photographs, this new book, "U.S.I. in the World of Chemistry," reviews the story of U.S.I. chemicals. It outlines the part U. S. I. is playing in the war, its role in the peace to come, and suggests many interesting future developments.

U.S.I. will be glad to furnish a copy to anyone interested in industrial chemicals. It is requested that you write for the book on your letterhead.

Unusual Instruments Developed for Resin Research and Control

Novel Melting Point, Viscosity, Hardness and Other Tests Employed at U.S.I. Newark Laboratories

Equipment and techniques for testing the physical properties of resins and protective coatings have had to keep pace with the giant strides this industry has made since the comparatively recent introduction of synthetic resins. As a result, many devices and methods have come into use which may still be "news" to other branches of the chemical industry. With the thought that these developments may be of general interest, or suggestive of ideas adaptable to other fields, CHEMICAL NEWS pictures here a few of the less familiar instruments used in the new and modern U.S.I. resin laboratories.

***Film hardness,* is measured by this simple but surprisingly consistent Sward rocker test. Calibrated to make 50 oscillations, as measured by two carefully adjusted bubble levels, on glass, the instrument gives the relative hardness of dried finishes. The harder the surface the longer the instrument rocks. It is also valuable in studying drying rates, solvent release and progressive oxidation.**

New Plastic Composition Is Easily Removed from Molds

Some form of "lubricant" is necessary for the removal of molded organic thermoplastics from their molds after forming. In the extrusion method, it has also been found desirable to assist the flow of the plastic through the extrusion orifice by the addition of lubricants.

The inventor of a new compound claims that all of the present lubricants have been deficient in some respect, such as excessive brittleness, objectionable odor, softness, and discoloration. According to his claims, lubrication is attained, with none of the adverse factors formerly encountered, by adding a lower alkyl radical containing from 1 to 8 carbon atoms to the molding composition.

One example given is a plastic mix containing cellulose acetate, diethyl phthalate, triphenyl phosphate and methyl 12-hydroxy stearate. Effortless release from both hot and cold molds is claimed for this mix.

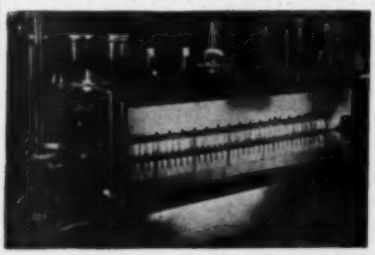
This type of addition agent is claimed to have similar advantages when used with nitrocellulose and other cellulose esters, and in compositions of styrene, vinyl esters, acrylic esters and like polymeric resins.

Fluorescence Suggested as New Test for Stored Foods

Following the discovery that it is possible to measure quality of stored eggs by their development of fluorescence, measurements have been tried on other types of foods.

A correlation has been discovered between fluorescence and the palatability of foods such as pork, bananas, linseed oil and various carbohydrates. Further applications of fluorescence to food testing seem to be indicated.

***This melting point test* is a far cry from the days of the capillary tube! Three grams of resin are melted in a test tube, allowed to solidify, and then covered with 50 grams of mercury. In a carefully controlled oil bath, the tube is heated until melted resin appears on the surface of the mercury. A thermometer in the mercury gives the melting point. This U.S.I.-developed test gives exceptionally uniform results and has been adopted by many other resin laboratories.**



***Viscosity* of transparent solutions is determined by measuring the speed at which an air bubble rises through the liquid. Shown here is the constant-temperature bath in which the sample is compared with a row of Gardner-Holdt tubes containing standardized solutions. The tube rack is arranged so that all tubes can be inverted simultaneously. The more viscous the sample, the slower the bubble rises.**

(Continued on next page)

ADVERTISEMENT—*This entire page is a paid advertisement.*

December ★ **U.S.I. CHEMICAL NEWS** ★ 1944

Pregnane Series Yields Sex Hormone Substitute

One of the androstenols, a compound of the pregnane series, when administered perorally, is claimed to have the effect of the female sex hormone, corpus luteum.

According to a recent patent, androstendione-3,17 is dissolved in benzene and then treated with ethyl orthoformate, absolute alcohol and alcoholic hydrochloric acid. After heating and cooling, the solution is rendered alkaline with alcoholic sodium hydroxide solution, mixed with water and extracted with ether. Following this extraction, the dried residue is recrystallized from pyridine containing alcohol.

A solution of the androstendione-3-enol-ethyl-ether, benzene and ether is flowed into a solution of potassium acetylide in liquid ammonia. After standing and the addition of benzene, the mixture is poured into water. The benzene-water-ether layer is then washed several times with water and evaporated to dryness under vacuum.

Without further purification, the residue is dissolved in ethanol, aqueous hydrochloric acid is added and the mixture is heated. Concentration and cooling crystallizes out pregneninolone which is then filtered and recrystallized from chloroform-alcohol.

Inverted Sugar Production Facilitated with Ethanol

To increase the production of dextrose and levulose, a recently patented process separates these sugars from a concentrated solution or syrup by treatment with ethanol and subsequent agitation.

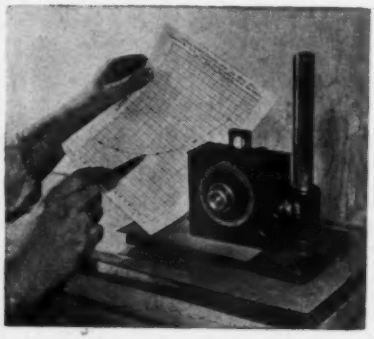
Essentially, the process consists of preparing a concentrated sugar solution, adding ethanol, agitating vigorously, and allowing the dextrose to crystallize out. The dextrose crystals are then separated from the mother liquor either by filtration or centrifuging.

Distilling the ethanol out of the mother liquor leaves a levulose syrup. Raising the pH value to about 3.5 with hydrochloric acid, concentrating to a Brix of 96 deg., and adding ethanol prepares the syrup for the crystallization of levulose. From this point on, the process is identical with the process described above for the separation of dextrose.

Unusual Instruments

(*Continued from preceding page*)

***To test shear-hardness,** a sample of the coating, applied on metal, is rotated by hand on the table of this Taber Abraser. Pressure on a stationary blade is gradually increased until the blade cuts through to the metal. To test abrasion resistance, the blade and supporting arm are replaced by a pair of carborundum wheels indirectly driven electrically. These abrade the surface by shearing action.*



***Film thickness** is measured magnetically right down to the thousandth of an inch in this Magne-Gage. The only requirement is that it be a non-magnetic coating upon a magnetic background.*

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A natural anti-oxidant, designed to preserve the flavor of foods containing either animal or vegetable fats, has been developed by a leading university and is now in commercial production. This substance, which looks like sugar, is derived from the creosote bush. **(No. 878)**

USI

Solventproof, transparent garments are offered, including gloves, caps, aprons, smocks, and sleeve guards. The full line is described in a new, free 16-page booklet. **(No. 879)**

USI

High wet strength filter papers, claimed to be practically tearproof when folded, are announced for laboratory and industrial use. Additional features are said to include resistance to dilute acids and alkalis and freedom from lint. **(No. 880)**

USI

Paint that resists up to 2500° F is announced. The paint is said to be non-inflammable, and to adhere to steel under temperatures up to 1400° F, and to alloy, brick and similar surfaces up to 2500° F. **(No. 881)**

USI

A new, self-bonding, resilient floor, said to feel like rubber and wear like stone, is announced for application over old cement, wood or composition floors without use of adhesives. It is claimed to dry in 36 hours, and to require no special application skill. **(No. 882)**

USI

A safe acetyl peroxide solution is now being offered in research quantities. Long known as an outstanding polymerization catalyst, bleach, and germicide, acetyl peroxide has been rendered non-explosive and immune to shock by dissolving it in dimethyl phthalate, according to the announcement. **(No. 883)**

USI

A green pigment, designed to add color to cement, paint and rubber, is announced. It is stated that this green pigment compares favorably in alkali and acid resistance qualities to chrome green. **(No. 884)**

USI

A new adhesive, developed by an aircraft manufacturer, is described as being capable of "sticking almost anything to anything". Among the claims made for the new adhesive, which is available as a liquid, paste, or tape, is that it will bond aluminum to steel in spite of their different coefficients of expansion. **(No. 885)**

USI

A fabric-treating chemical, said to make sheer stockings run resistant, and to remove shine from serge suits and make fabrics wear longer is on the market. The new treatment may be applied either by spraying, immersion, or sponging. **(No. 886)**

USI

Imitation chrome finish, claimed to produce an excellent simulation of real chrome, is offered in the form of a paste. **(No. 887)**

U.S.I. INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N. Y. — BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96%, Absolute
*Super Pyro Anti-freeze
*Solox Proprietary Solvent

***ANSOLS**
Ansol M
Ansol PR

*Registered Trade Mark

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES
*Curbay B-G
*Curbay Special Liquid
*Vacatone 40

ACETONE
Chemically Pure

RESINS
S&W Ester Gums—all types
S&W Congo Gums—raw, fused & esterified
S&W *Aroplaz—alkyds and allied materials
S&W *Arotene—pure phenolics
S&W *Arochem—modified types
S&W Natural Resins—all standard grades

OTHER PRODUCTS
Collodions
Ethylene Glycol
Nitrocellulose Solutions
Ethylene
*Indalone
Urethan

The seed pods of tropical orchids were, from 1510 to 1876, the only source of vanilla, highly prized for its delicate aroma and flavor. Then it was discovered that vanillin, principal constituent of vanilla, could be manufactured from oil of cloves.

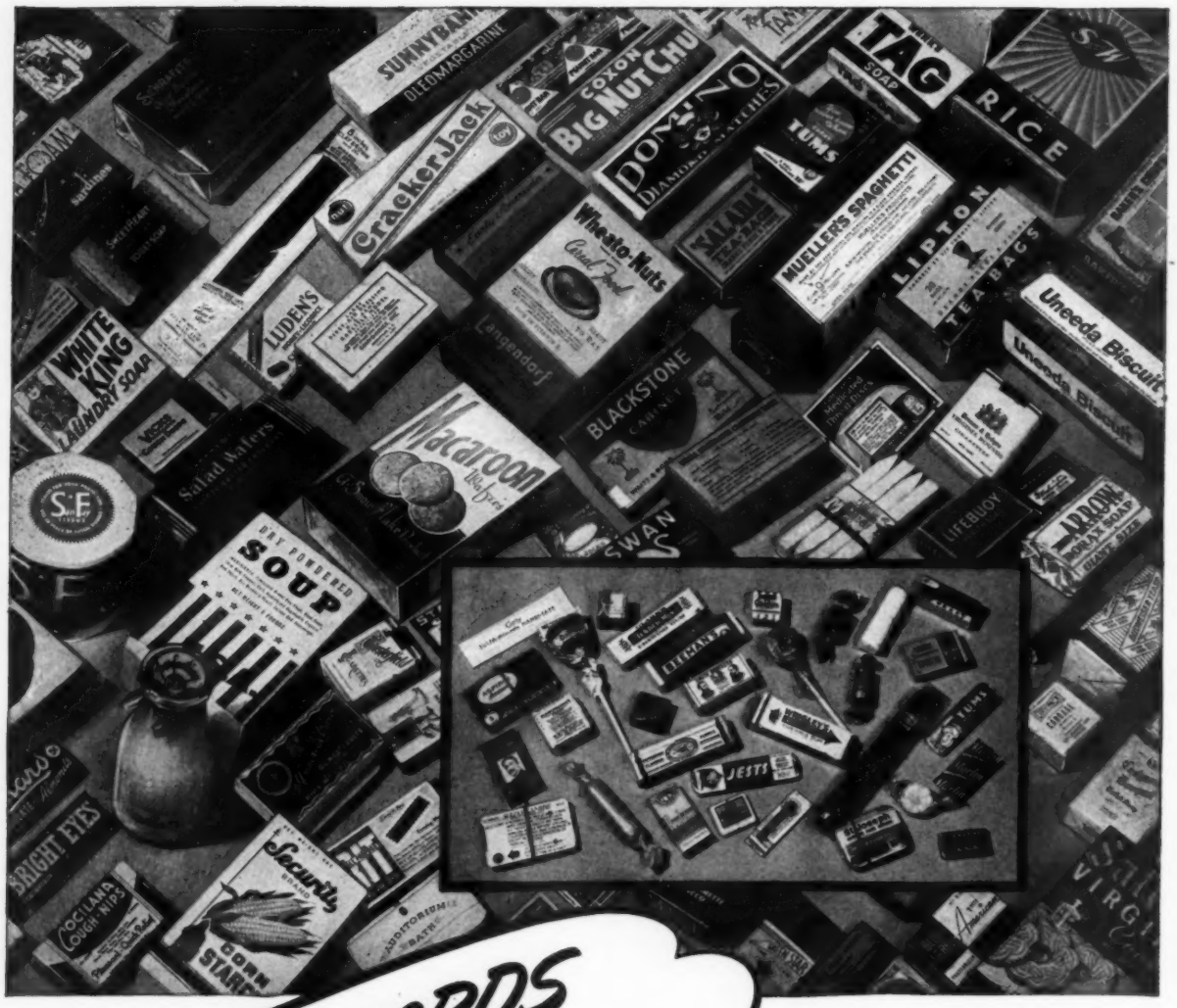
By 1929, as a result of Monsanto research, the test tube had supplemented both orchids and cloves, making vanillin plentiful and economical.

Vanillin Monsanto is produced under exacting methods. Each lot is checked by careful laboratory control. Raw materials used in making the flavor base also are produced by Monsanto under similar precise methods and controls. That is why Vanillin Monsanto always has true aroma and uniform flavoring strength.

We regret that we cannot promise prompt delivery of large quantities of Vanillin Monsanto. However, we shall be pleased to send you complete details and samples for your experimentation. Inquire of: MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Montreal, Toronto.

MONSANTO CHEMICALS
SERVING INDUSTRY...WHICH SERVES MANKIND

MONSANTO FLAVORING MATERIALS—
Coumarin Monsanto,
Ethavan (Ethyl Vanillin),
Methyl Salicylate Monsanto,
Vanillin Monsanto.



"BUY" WORDS in thousands of stores

Many of the products you see here bear names worth millions —names that have become "buy" words throughout the land. The high standards of quality maintained by the makers of these well-known products is reflected in the perfection of their packages—all of which are wrapped on our machines.

We have served the package goods industry for over 30 years. During that time we have consistently pioneered in the development of faster, more efficient wrapping machinery and new types of packages designed for sales.

Consult us in the early stages of your packaging plans. Our suggestions may lead to better packages and lower costs.

Write for our new booklet "Sales Winning Packages"

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PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Production Forum

By Francis Chilson

Industrial Consultant

Tablet Press

Defiance Machine Works, Inc., Defiance, Ohio is advocating the use of their single-punch, mechanical crank-type press, which was developed expressly for the plastics industry, as a means of compressing medicinal tablets at a high rate of speed. The firm claims that at least one drug manufacturer is already using these presses and that with a thirteen cavity die this manufacturer produces one million seven sixteenth inch tablets every twenty-four hours. Extreme accuracy in weight is claimed for the machine in question. Because the supply hopper is lined with impervious porcelain the press lends itself to easy cleaning and assures rapid shifts from one color to another. By means of a reciprocating feed mechanism smooth flow of granulation into the die is assured. Weight and density of the tablets may be varied while the machine is in operation. Old timers will recall that single punch presses were often used with multiple cavity dies, but until now I never heard of dies with more than four cavities used in manufacturing medicinal tablets. Times do change, however, and it will pay you to look into this. As I see it, rotary presses apply pressure at one or two points. If a given tablet requires three tons per square inch a press that punches out ten at a time would be required to exert a total pressure of thirty tons, whereas a rotary would require either three or six tons depending upon whether it is designed with one or two pressure points.

Hartmann Dehydrators

In a previous issue I described the Hartmann portable dehumidifying units. Recently Hartmann wrote me that he had made some installations where the machine was used as a bacteria inhibitor in sterile packaging and ampoule filling rooms. Presumably this device loaded with granulated activated carbon could be used to adsorb odors. Will speak to Hartmann about this when I see him in Chicago.

Showers For Shock

My old friend Charley Gillispie of McHenry, Ill., wrote me recently in response to the piece I wrote some time ago "When the Boys Come Back," that he could appreciate how many of the boys feel. Charley says that when he returned in 1919 he was so much on edge that any sudden noise would cause him to jump a mile and that he was even afraid to cross the street. Charley says that the doctors in the Vet's hospital made him take cold showers twice daily, which incidentally he still does, and that the treatment was very effective and he'd like other vets to know it. It's a damn wonder the treatment didn't kill him. I used to take cold showers once upon a time but now the closest I come to anything cold is when I lap up a scotch and soda.

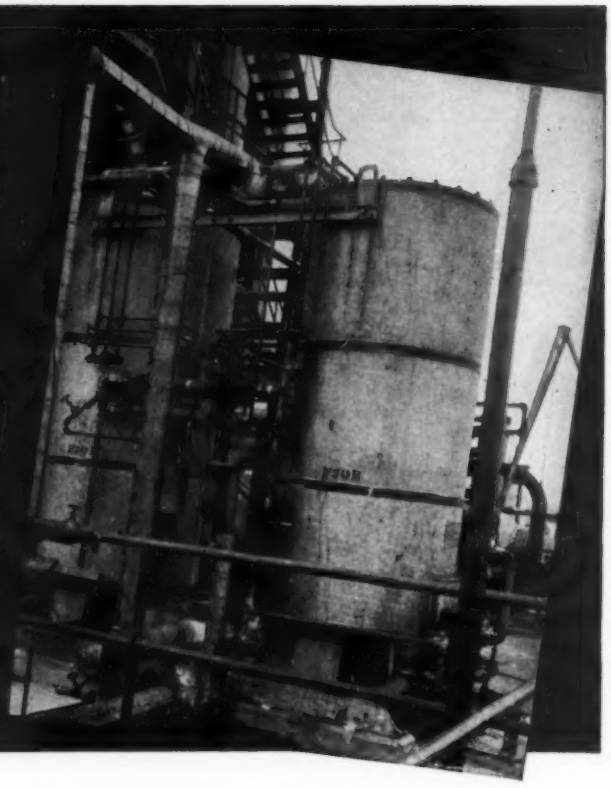
Airay

This is the trade name of a new dryer using radiant heat in the form of infra red rays plus convection in the form of controlled air currents, just introduced by J. O. Ross Engineering Corp., 350 Madison Avenue, New York City 17. The first installation is in the form of a continuous pan dryer and was developed for drying crucibles. Presumably the same idea can be applied to continuous belt and tray dryers where direct exposure of the material to the infra red rays can be secured.

Vibrating Dryer

Jeffrey Traylor Vibrator Co., Columbus, Ohio makes, as you know, vibrators of all kinds. It may be of interest for you to know that they have made continuous vibrating dryers for drying effervescent salts and similar drug materials. The vibrator consists of a pan thirty six inches wide and twenty or thirty feet long. The pan is jacketed and depending upon the use to which the unit is put either a heating or cooling medium is circulated through it. This vibrator can be hooded and air circulated through it, and the hood itself can be lined with infra red lamps. Such a dryer has several inherent advantages. First of all the material is continuously moved and agitated. Secondly, the layer of material can be extremely thin—this being influenced by the vibration frequency which is adjustable. Thirdly, it would be possible to circulate coolant through the jacket and warm air through the hood, thus making

As DRYing needs develop, LECTRODRYER has the Know-How



DRYing benzol is a case in point—

Water in benzol has always been objectionable, and users dried it in a perfunctory sort of way. Then along came new uses for benzol which called for really drying it DRY. Chemists now talk in such terms as "3 to 7 parts of water per million".

Finding that amount of water in benzol is like trying to spot one Jap in seven acres of Chinese. But that's the kind of moisture-seeking-out jobs that Lectrodryers are handling. Activated alumina, the drying agent in Lectrodryers, dries benzol and other hydrocarbons within the present limits of measuring their moisture content.

The Lectrodryer pictured above dries benzol used in the production of plastics. Other Lectrodryers dry air, gases and various organic liquids, working at atmospheric pressures or as high as 3,000 pounds per square inch. They dry to extremely low dewpoints or operate in connection with automatic controls to maintain constant moisture contents.

Whatever your DRYing problem, it is quite likely that our engineers have previously solved similar ones. No need to waste the time of your men on unfamiliar tasks. And, often, there's a standard Lectrodryer ready to step out of the catalog and handle the job for you. PITTSBURGH LECTRODRYER CORPORATION, 309 32nd Street, Pittsburgh 30, Pennsylvania.

LECTRODRYERS DRY WITH ACTIVATED ALUMINAS

PITTSBURGH

LECTRODRYER

CORPORATION

possible rapid drying of abnormally sensitive materials. I don't see how you can beat a combination of regulated air mixed with a continuously moving, continuously agitated thin stream of material moving over a heated surface. I pointed out to Jeffrey that by dividing the pan of the vibrator into channels it would be possible to dry several different small lots of material without risking contamination. Seems to me that truck dryers do not provide the ideal answer to granulation drying.

Mixing

American Tool and Die Co., East Reading, Pa. have developed a portable, propellor type mixer which should have wide appeal to manufacturers of cosmetics and pharmaceuticals. This job consists of a double propellor assembly so designed that the propellors rotate in opposite directions at different speeds. This is accomplished by having one propellor mounted on a sleeve or tube inside of which the shaft rotates. Rotation of the outer sleeve in the opposite direction is accomplished by means of planetary gears within the motor housing. The type and thrust of the propellors can be made to suit your requirements. In such an assembly it would be possible to use a small turbine on the end of the main shaft and some type of propellor on the sleeve.

Sound Film

Now comes a dictating machine which impresses sound tracks on ordinary 16mm film, which can be played back to reproduce the conversation that went on at a meeting or what have you. Chemists can use this for recording meetings. The SM can make a spiel into it and ship out duplicates of the film to branch offices, thus enabling him to give the boys a pep talk once a month. Such a gadget embalms a meeting so that minutes are unnecessary and nobody can crawfish on what he said at a given time. Letters and reports can be dictated and recorded on film. The apparatus is not expensive and can be obtained from Miles Reproducer Co., 812 Broadway, New York 3, N. Y.

Accumulating Table]

Island Equipment Corp., 101 Park Avenue, New York 17, New York have added to their steadily expanding line of packaging and handling equipment, a rotary accumulating table designed for insertion into regular packaging lines to provide a buffer or pool between intermittently operated packaging machines. It is particularly useful between machines that are subject to frequent momentary stops such as labeling machines.

Truck Loader

Shippers who must load cars or trucks from grade will be interested in a portable roller type booster made by Jarvis B. Webb Co., 8951 Alpine Ave., Detroit 4, Michigan. This gadget is especially designed for handling heavy cases. It possesses the interesting feature that while the rollers will rotate as a case is pushed forward and upward, they will not rotate backward. Hence a case pushed partway up the incline and then released will remain right where it was.

Powder Fillers

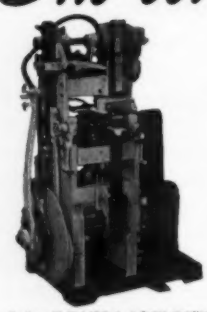
A lot of equipment builders will get sore at me when I say this, but it is my considered opinion that by comparison with the perfection of other types of filling equipment, powder fillers simply don't rate. Nobody makes a good one. The damn things are noisy as hell or dusty or slow or inaccurate or hard to adjust or hard to clean or what have you. Of course I know that powders vary more than fluids or pastes and that, being dry and more or less abrasive, they are much harder to handle. But even so a whale of a lot of little things could be done to make powder fillers quieter, faster and less dusty. I'm not too sure that cramming powder into a container with a screw or auger is the right way to do the job. Bill Bristol did a pretty swell job when he designed a vacuum powder filler for Sal Hepatica. This machine, as I remember it, fills twenty small jars at a shot by vacuum. Of course Sal Hepatica is granular and relatively easy to handle by comparison with some other materials, but Bill hit on an idea in the design of this machine which may provide a clue for the correct design of all powder fillers. The Sal Hepatica is agitated, I forget how—it's been several years since I saw the machine—but as I remember it the material was kept in suspension to insure an even flow to the filling ports. All auger fillers operate on the principle of trying to ram powder into the containers regardless of how it comes to the augers—no preliminary treatment is given to ensure uniform density in the supply. Hence, there is no regular uniform flow of material to the augers. Supply hoppers contain crude agitators and auxiliary priming augers but these are inadequate. I'll frankly admit I don't know the answer but I think it lies in precompression of some sort. I'll have to mull this one over a scuttle of beer with some of my cronies whose inventiveness increases with their alcoholic content. "Maybe we'll get some ideas."

Busted Bones

Rumor has it that Turner Currens and John Paul Snyder broke their arms while hastily snatching their hands away from a check which a poorly trained waiter had placed near them. I don't know the exact circumstance but both have broken arms. The accidents could have occurred bar hopping or table thumping but I doubt it. But there may be some truth in the rumor after all because neither has ever been known to have broken an arm or even sprained a wrist in reaching for a check. It is ironical indeed that while both gentlemen have been known to roll the bones (for the benefit of Mr. Currens, of course) this is the first time that either has broken any. On second thought there may have been some truth in the rumor that Turner *really* was the wraith who flitted about Matoon, Illinois recently. But that wouldn't explain John Paul's busted wing. Possibly he was winged by somebody who

She bet on a horse—*

...and Won!



*the PONY LABELRITE

Three girls were badly needed on production—and couldn't be found—until the boss' secretary urged the installation of a Pony Labelrite. She remembered hearing that Labelrites eliminated the wiping of containers; required no Re-positioning of labels. *That* spelled the doom of the old labeling method, in favor of the Pony with its perfect register, its 60 or more per minute, AND—the needed help was found right in the plant! Maybe faster, *better*, precision labeling Labelrites will do as much for you. To save both time and money—for years—send for a Labelrite Catalog. See what you CAN get in low-cost Labelrites!

NEW JERSEY MACHINE
CORPORATION

16th St. & Willow Avenue . . . Hoboken, N. J.

Chicago Office: 325 W. Huron Street

caught him poaching. Whatever the truth of the matter I could never connect J. P. with the Matoon incident. John Paul never could resemble a ghost to me after I once saw him asleep with his face in a plate of spaghetti. Good old John Paul! Now that he's got a busted wing why doesn't somebody sell him another horse?

Tablet Counter

Sorry there's nothing to report on the tablet counter I described to you some time ago. Not one lick of work has been done on it since Uncle WPB pulled the engineers and mechanics off it many months ago. Since the priority I have for it mentions a specific firm, there's nothing I can do but wait until the war clouds clear a bit.

Floor Patching

If any of you has had a really satisfactory experience with concrete floor patching compounds, I'd like to hear of it. Manufacturers of these compounds claim that their respective materials will not crack or chip or soften or dust off. But to this date I have not found one that fulfills these requirements. Some of the stuff that is widely ballyhooed is not worth a damn.

Portable Elevator

The well-known manufacturers of portable elevators and other material handling equipment, Revolvator Company, North Bergen, New Jersey, announce a new model portable elevator for extremely light and convenient servicing of ceilings, sky-lights, overhead lighting fixtures, overhead heaters and, in fact, all overhead repair work and cleaning at a height of not over 24 feet.

The design of this model combines the well-known Revolvator (Reg. U. S. Pat. Off.) telescopic principle with that of the hinged model as follows: Starting with the machine collapsed to a height of 7 feet, the middle portion of the frame is turned up to an up right position on hinges. The upper section with the platform at the top is then raised by hand crank to the full height or any lesser height desired. This design permits the machine to be wheeled under low doorways or other obstructions to the desired position. Although of lightweight structural steel the machine is so designed as to be extremely rigid, with a liberal factor of safety permitting one or two men with tools to work on the raised platform without danger. The machine contains other factors of safety including machine cut gears, wide spread auto-type steering, independent floor lock, self closing brake and broken cable safety which holds the platform stationary in the event of breakage of the cable.

This Revolvator model is not intended for lifting and piling merchandise. For that purpose the manufacturers recommend one of their standard portable Revolvators with either revolvable or non-revolvable base, telescopic or hinged model, electric or hand hoist and a selection of platforms to suit the type of material to be raised.

The new Revolvator service elevator has a definite place however for both emergency and regular use to raise a man to any moderate height within a building for any purpose. Full details regarding the machine will gladly be sent by the Revolvator Company to any one interested.

New Auger Packer

A new, improved auger packer for filling and packing powdered materials has been developed by the Triangle Package Machinery Company, 906 N. Spaulding Ave., Chicago. It is used for filling all kinds of powders in quantities from several ounces up to five pounds, and works equally well with cans, bags, cartons, or jars. Production on 1 lb. packages is 30 or more packages per minute, depending on product, degree of packing, and type of container used.

By utilizing automatic feeding of the material instead of by foot lever control, production is increased from 10% to 25% over previous models. Eliminating the foot lever also reduces operator fatigue considerably. Automatic operation is accomplished by means of a solenoid switch which releases the feed clutch when the container is raised to filling position.

Another new feature of this auger packer is an electrically controlled emergency stop switch that enables the operator to instantly cut off the feed of material from the auger and thus prevent wasting of material if anything goes wrong. The packing bowl can be removed instantly by loosening three nuts, an exclusive feature that saves time when the packer has to be cleaned for a change of materials. The complete, streamlined unit is totally enclosed for safety, protection from dust, and neat appearance.

The Triangle Package Machinery Company manufactures a complete line of weighing, filling, measuring, and carton-sealing machines.

Intimate Blending Equipment

This development by Sprout-Waldron & Company, of Muncy, Pennsylvania, has reached the stage where experimental results on a wide range of fine powders backed by successful installations in tonnage production now warrant release of general publicity. It is applicable to mixtures of powders finer than 100 mesh or to mixtures of fine powders with liquids to give a dry free-flowing product, where a degree of homogeneity beyond that obtainable by conventional mixing is essential.

The system includes a sifter inlet to eliminate compacted lumps in the feed (resulting from storage), followed by a brief premixing in the conventional manner. Where a liquid is to be included, it is sprayed from a manifold during the premix period.

There follows a thorough violent agitation of the premix as it passes in a thin layer through a high speed disc blender which insures positive intimate dispersal of very small persistent clumps.

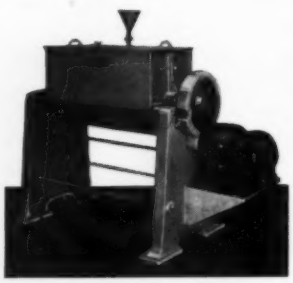
The blender product drops to an agitated aerator-mixer which maintains free-flowing characteristics

Teamwork in Your Tablet Department

WITH MODERN STOKES AUXILIARIES

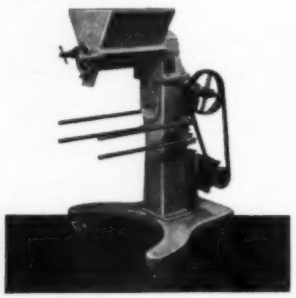
Mixers

The Stokes No. 21 Mixer illustrated below is equipped with an improved, interrupted-type spiral agitator which makes a rapid, thorough mix with less granulating fluid. Excellent, also, for adding colors, lubricating powders or flavoring oils to granulations. Drying time and labor costs are lowered. Has small hopper and spray pipe for adding granulating solution. Tilts for discharge. Ruggedly built for hard use. Made in four sizes . . . belt or motor driven.



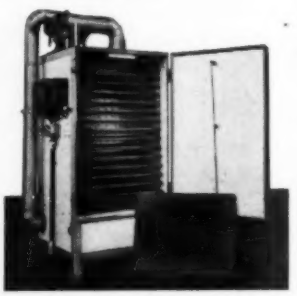
Granulators

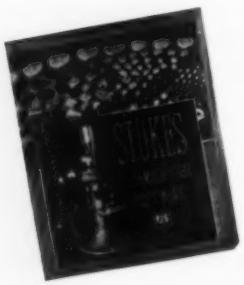
This Portable Granulator, No. 43-A, handles 90% of all pharmaceutical granulations, including extract mixtures. Has proved ideal for effervescent salts and, when equipped with a special screen, for breaking down slugs in precompression methods of granulating. Forms uniform granules with minimum "fines." Screen changes easily made . . . cleaning simplified. Operates quietly . . . is built for severe service . . . is easy to move from one department to another. Made in several sizes.



Drying Closets

Illustrated below is the Stokes No. 38 Drying Closet, an ideal shelf-dryer for pharmaceutical granulations, salts and various other products. Completely self-contained, electrically heated, with motors, piping and dampers as shown below. Thermostatic control optional. Improved design cuts heat requirements and reduces drying time 40% or more with assured uniform drying. Made also for use with steam heat, and in smaller 5-shelf model for laboratory use.





For more than 40 years we have designed, built and installed the tablet machines and complete auxiliary equipment now in use in many leading pharmaceutical laboratories throughout the world. We are, therefore, aware of the importance of inter-machine teamwork in turning out uniform quality products at a minimum of cost.

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quickly lost when such powders are allowed to settle. It also acts as a storage reservoir for sacking. When a small amount of such a blend is pulled out into a thin layer under a spatula it is found virtually free from streaks or spots.

The method has proven applicable to a wide variety of materials tested. The chief advantages offered include a product of unusual uniformity, turned out at high capacity and with low power. The system pictured is now producing fine insecticide dust blends at the Michigan Fertilizer Company, Lansing, Michigan. Though operated by a single 15 HP motor, production rates in excess of five, 500 lbs. batches per hour have been reported. Details of larger systems now in successful operating and completely engineered for dust-free production and packaging are available upon request.

This would be a swell set up for face powder.

Pensions

I don't mind telling you that a number of near-pensioners have raised hell with me because of my attacks on executive pensions. Noting that pension systems are on the increase, a trend stimulated no doubt by the tax situation, which permits deduction of employer contributions, it has occurred to me that an ideal pension system could be worked out. I can't see the sense in forcing a man to work until he is too damn old to enjoy his pension before he gets it. Neither can I see any benefit in a system which stratifies top management and prevents the rise of the younger generation. I suggested to a broker who has had much experience in devising pension plans that pensions for executives getting over a certain sum should be made mandatory at the age of fifty—at the discretion of the board of directors—or by popular vote of the minor executives below him. Then if an executive really had a lot on the ball he could be granted a five year extension. If on the other hand he had begun to slip he could be retired without hurting anyone's feelings. Larger companies might work out a "council of elders" to which a man past fifty would be retired. These elders could serve on committees which take up far too much of an active executive's time anyway and as committeemen they could help formulate policies and act in general as consultants. But their responsibilities would be carried by younger shoulders. Such a plan would retain the wisdom of the elders while giving the younger executives a chance to carry the responsibilities and the power of running the business.

Budgets

Along about December first there is much scratching of pencils as department heads and executives all through the trade pore over figures and plan budgets for the new year. A budget can be a blessing or a curse and most of them are curses because they are prepared and controlled by accountants, who as a class have become so myopic from mulling over figures and tax regulations that they resemble ostriches. They can't see over the tops of their books. Budgets should be prepared and controlled by operating men and engineers with accountants passively furnishing the figures.

I believe in properly prepared and controlled budgets as management instruments. It is perfectly right and proper to predetermine income and expenses and to set up means for controlling expenses. It is in control that most budgets fall down. In the first place department heads seldom get their reports until far into the months succeeding the period covered by the report—too late to take effective measures against leaks. This condition is caused by the fact that accountants insist in including redistributed items such as insurance, taxes, power, etc. before the reports are completed. Such items never should appear in a budget except in total. How the hell can a department head control or influence charges such as building and equipment depreciation, insurance, realty taxes, etc., with which he has nothing to do and which in the case of depreciation is a bookkeeping fiction anyway?

A budget should be prepared not at the end of the year but at the end of the third quarter when performance against anticipation can easily be measured and a pretty accurate forecast of the rest of the year can be made. The sales forecast for the succeeding year should be made by item. This is the starting point. The items are converting into net selling price less provision for discounts and bad debts. The resulting figure will be the anticipated income for the year.

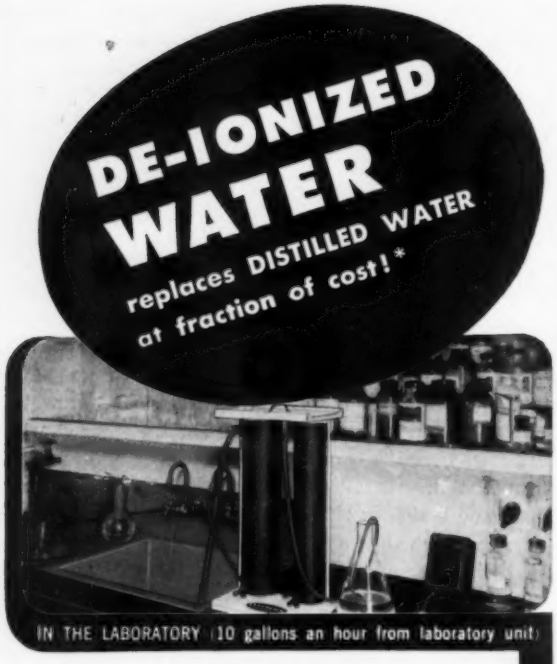
By reference to the cost of manufacturing each item, the anticipated sales plan can be broken down into terms of raw and packaging materials, labor, fluid operating expenses and fixed expenses.

From the total anticipated net income lump sum deductions should be made for all items which cannot be controlled by management, such as the cost of materials, really taxes, depreciation, insurance, etc. The cost of materials can of course be considered a purchasing department budget and this department can be authorized to make commitments in accord with a monthly schedule which conforms to the requirements of production.

By eliminating from anticipated income all items over which management can exercise no control a figure is arrived at, out of which the cost of operating the business must be met; out of which taxes on income must be paid; out of which a profit must be made —if possible. This figure can be controlled.

The controllable income can be subdivided by major divisions such as advertising, sales expense, administrative expense, factory expense. These again should be broken down by departments to suit particular instances. Redistributed items such as light, heat and power should not be redistributed to individual departments (redistributions hold the statements up) but should be deducted as lump sums from the total of factory operating expense. If the cost of redistributed items is in line with budget allotments there is no need for budget purposes, in attempting to distribute them.

Budgets should be made for anticipated capital ex-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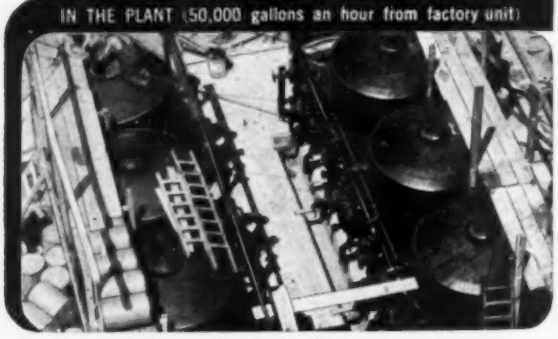

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penditures of course. But it is foolish to attempt to relate capital expenses having a life of many years with the expenditures of any one year. The correct procedure is to assess against each year only its fair share which amounts in effect to the depreciation charge with due provision for obsolescence.

Above all a budget of *plans* should be prepared. There is no point in drifting from one year into the other without a chart. Since you know what you are going to sell and produce you should then plan how you are going to sell and produce it. It has been my observation that salesmen plan future operations as a rule a damn sight better than production men. Production plans should include anticipated maintenance, modernization projects, process improvements, etc.

A budget, simple in conception and intelligently controlled, can be at once a guiding light and a prod. Don't make analysis too detailed. When executives have to spend too much time comparing trivial figures they soon ignore the budget altogether. Also when reports arrive too late the usefulness of the budget is impaired. Departmental budget reports since they deal in the main with labor, should be prepared on a weekly basis and the last report for a given month should be available within a day or two after the close of the month. Instead of a month I should have said each four week period. Excepting in an incidental sense there is no immediate connection between the general accounts and the budget. Budgeting on a weekly basis avoids month-end distributions and breakdowns which delay reports. There's no good giving a man a report unless he gets it in time to use it.

Single vs. Multistory

Ran into some interesting figures published in 1937 by the Austin Co. comparing the square foot cost of single and multistory structures. Single story construction, land costs included, ran something like $1.87 while the multistory structure ran $2.85. But what is more striking is that I just made an analysis of space in a six story building having a 200 pound bearing load and the total area of columns, elevators, stairs and fire escapes amounted almost exactly to the net available space on a single floor!

USES FOR FUSEL OIL: Can you tell us whether fusel oil is used in great extent in the drug or cosmetic fields and if so, for what purpose? Any assistance you might be able to give us will be appreciated. New York.

Fusel oil or amyl alcohol was formerly used in nail lacquer but because the odor is so hard to mask, it is not used to any great extent at present. Amyl alcohol is employed quite extensively in the manufacture of alkaloids. Back in 1910 it was suggested as a disinfectant and desiccant in the local treatment of cancerous ulcers, but it is rarely used for medical purposes today. It is an important chemical reagent for making tests of drugs. Pure fusel oil has been employed in the manufacture of artificial fruit essences and certain of its derivatives are used in other flavoring materials. It is not used to any extent in perfume.

Vitamins "On the Spot"

(*Continued from page 663*)

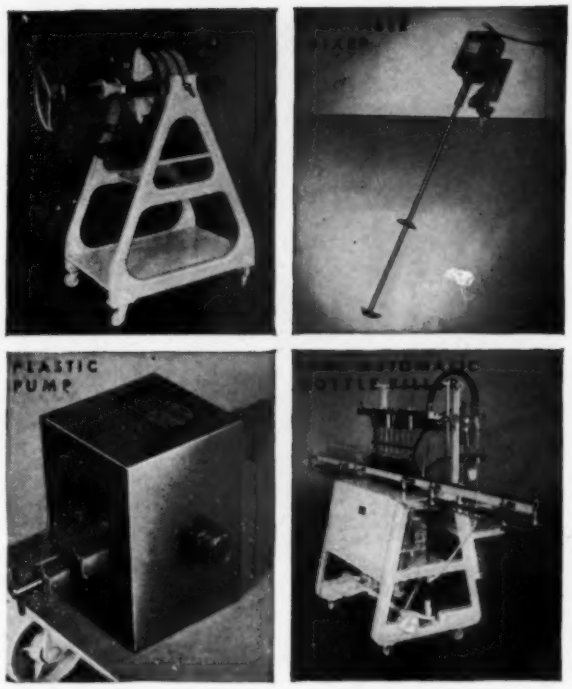
ficial effect, is the report of Professor Howard W. Haggard, director of the Laboratory of Applied Physiology, Yale University, as the result of his test of feeding vitamins and minerals to the employees of a large eastern aircraft plant. Professor Haggard's report shows that 80 per cent benefited generally, and 21 per cent felt less tense, less irritable, and more peppy. Better sleep was experienced by 49.8 per cent during the first month, and by 46.9 per cent during the second month. Men produced better to the extent of 28.7 per cent in the first month, and 46.1 per cent in the second month. Less fatigue was experienced by 36.9 per cent of the men in the first month, and by 71.2 per cent in the second month. Greater alertness resulted in 34 per cent of the men in the first month, and 38 per cent in the second month. Increased appetite was experienced by 24.3 per cent of the men in the first month, and by 43.2 per cent in the second month. Fewer colds were had by 13.3 per cent of the men in the first month, and by 47.6 per cent in the second month (the test was made during the months of January and February, 1942); value of production per man per day rose 33.9 per cent in the group taking the vitamins and minerals; increase in absenteeism during the months of January and February (the worst months for absenteeism due to colds, grippe, and other respiratory ailments) was ten times less in the group taking the vitamins and minerals. Spoilage in materials was 37 per cent less in the group taking the vitamins and minerals. During the last week of the test, the labor value for the group taking vitamins and minerals was 10.92, compared with 7.34 for the control group.

The indications clearly are that while vitamins are beneficial, many people taking them do not obtain results because they do not need them, they do not take the proper ones, they do not take them consistently, or they do not know how to measure the effects. Many people taking vitamins think that these preparations will cure all their ills and keep them feeling well even though they abuse themselves in the way of diet, drinking, and other things. When a person goes to the doctor, these things are kept under control and the results of the consumption of vitamins can be observed.

It is for these reasons that, while vitamins will continue to be used in a fairly large way, much of the indiscriminate use of these products will cease, causing a recession from the peak of vitamin sales which appears already to have been reached.

Ethical manufacturers generally are alert to this state of conditions and they realize that while a recession in indiscriminate use of vitamins will not affect them to as great an extent as it will affect the sellers of consumer-advertised vitamin preparations, nevertheless they will feel it. They are now working hard on the production of the products which are expected to provide the next great wave in therapeutics and to supple-

(*Continued on page 740*)



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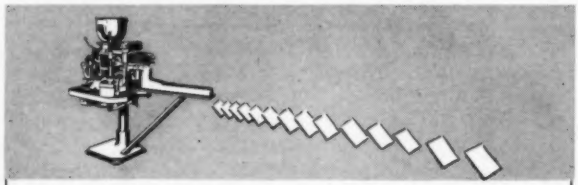

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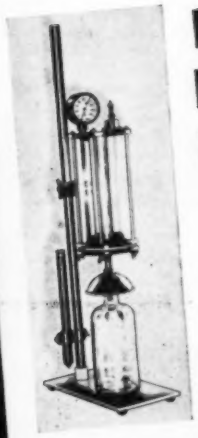

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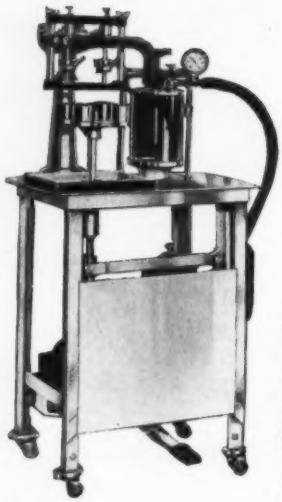

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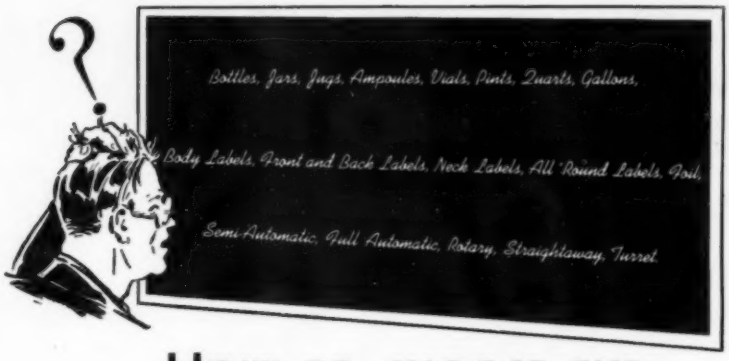
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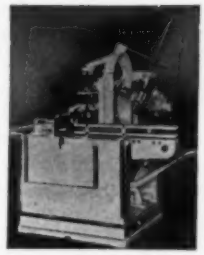

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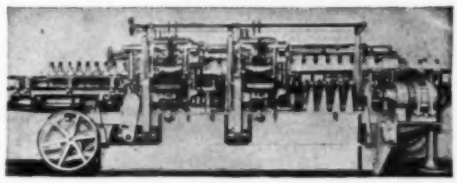

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ADVANCING THERAPY

Sulfas and Vitamin K Deficiency

In a discussion on sulfonamides and vitamin K deficiency, A. Kornberg, F. S. Daft and W. H. Sebrell (*Public Health Rep.* 59:832. 1944) mention the work of others who have produced vitamin K deficiency in rats by inclusion of sulfonamides in the diets, and report further data on the production, prevention, and correction of this type of deficiency.

It was found that sulfapyrazine, sulfathiazole, or sulfadiazine produced severe hypoprothrombinemia and hemorrhage in 2 to 3 weeks; sulfaguanidine, sulfanilamide, and succinyl sulfathiazole were less effective. The hypoprothrombinemic or hemorrhagic state could be prevented by oral administration of vitamin K. The specific and fairly uniform responses of the hypoprothrombinemic rats to a known potency of vitamin K is also suggested as a basis for the use of these rats in the assay of vitamin K activity of crude substances.

Plaster Dressing Deodorizer

The Orr-Trueta treatment of war wounds, which provides for thorough immobilization of the injured part in a circular plaster of Paris casing, has become a recognized procedure. One disadvantage of this treatment is the fact that after an interval of time, portions of the cast become saturated and foul smelling due to wound secretions and bacterial growth. Quite a few suggestions and methods for overcoming this often highly obnoxious odor have been made. Among the latest is a saturated iodoform-benzoin solution developed by C. M. Silver and H. W. Rusbridge (*Military Surg.* 95:233, 1944). Stable and easily prepared from readily available materials, the solution contains:

Iodoform	**3.0**
Compound tincture of benzoin, to make	**240.0**

Applied daily to the odorous portion of the plaster cast, the solution has been tested on more than 100 cases and has proven effective in counteracting the foul smell encountered with such plaster dressings.

Buffered Fluoride Studies

Because of the interest aroused by the possibility of using fluorides as a means of preventing dental caries and cognizant of the potential dangers of these salts when ingested or applied to teeth, R. R. Smith and E. O. Shaner (*J. Am. Dent. Assoc.* 31:1483, 1944) undertook a laboratory investigation on the effects of suitable buffered fluoride solutions. They found that the guinea-pigs administered a double lethal dose of sodium or potassium fluoride died in forty to sixty minutes, whereas eighteen guinea-pigs administered double lethal doses of sodium or potassium fluoride buffered with calcium carbonate with or without magnesium oxide did not die. These animals exhibited normal activity and resumed regular feeding within an hour and a half after administration of the fluorides.

These favorable results of the use of the buffered fluorides indicate a drastic reduction of toxicity. Hence, Smith and Shaner feel that these conclusions reflect the promising possibilities of using the fluorides in a dentifrice with a safe outcome even though it perhaps might be ingested in small quantities.

Phthalylsulfathiazole

In the *Journal of Laboratory and Clinical Medicine* (29:785, 1944), E. J. Poth and C. A. Ross report that an extensive study covering twenty acylated sulfonamides in an attempt to find substances possessing antibacterial properties and being poorly absorbed from the alimentary tract has resulted in the synthesis and discovery of several compounds fulfilling these specifications. They report experiences with phthalylsulfathiazole, a condensation product of sulfathiazole and phthalic anhydride. It is an antibacterial agent of considerable interest and of therapeutic possibilities when activity restricted to the alimentary tract is desired. As compared to their respective bacteriostatic activities, when measured by their ability to suppress the coliform organisms, phthalylsulfathiazole possesses roughly twice the activity of succinylsulfathiazole. In the absence of diarrhea and ulcerated lesions in the bowel a single daily dose of phthalylsulfathiazole will effectively lower the coliform organisms in the feces.

Poth and Ross describe preliminary trials of phthalylsulfathiazole in nonspecific diarrheas, bacillary dysentery, chronic ulcerative colitis and for the preoperative preparation of the large bowel. The drug appears particularly well tolerated by patients having ulcerative colitis and is quite effective in inducing and maintaining prolonged remissions. Severe toxic manifestations have not been encountered in patients with ulcerative colitis even though the therapy has continued for several months. Phthalylsulfathiazole can be maintained in high concentration in the diseased alimentary tract with low concentrations in the blood.

PABA for Typhus Fever

Para-aminobenzoic acid, commonly referred to as PABA, may have a new important medical use, according to the report of A. Yeomans, J. C. Snyder, E. S. Murray, C. J. D. Zarafonetis and R. S. Ecke (*J.A.M.A.* 126:349, 1944). They report that, in Egypt, twenty cases of louse borne typhus have been treated with para-aminobenzoic acid. Their clinical course has been compared with that of 44 "untreated" cases. The data from this study show that: Large amounts of para-aminobenzoic acid were administered with ease to patients suffering from typhus. There were no unfavorable effects when para-aminobenzoic acid was properly administered with the exception of a tendency to develop a low white blood cell count. When treatment was started in the first week of illness, the clinical course of the patients who received para-aminobenzoic acid was much less severe than that of the "untreated" patients. The average duration of fever was considerably shorter in the treated group.

Hence, it is concluded that large doses of para-aminobenzoic acid exert a definite beneficial effect on the course of louse borne typhus if treatment is started in the first week of illness.

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Sulfa-Treated Films for Burns

W. de W. Andrus and J. A. Dingwell (*Ann. Surg.* 119:694, 1944) write that of 57 patients with burns, treated by sulfonamide-impregnated membranes, only two died and these were infants with burns covering more than 70 per cent of the body area. The membrane or film was made of methyl cellulose-triethanolamine, buffered at about pH 8.5 and impregnated with 20 per cent sulfonilamide and 10 per cent sulfacetamide so that one square centimeter contained 3 milligrams of sulfa drug. After patients were treated for shock, the burned area was debrided under sterile conditions and the membrane applied; in children it was fastened in place by light plastic. As the film dissolved it was replaced by fresh plastic until the area was completely healed. No toxic reactions occurred and the rate of healing occurred at a speed somewhat directly proportionate to the area involved.

In a more recent report, these workers (*Ann. Surg.* 120:377, 1944) evaluated the results obtained after a comparison of various types of local treatment in a controlled series of 82 second degree experimental burns in human subjects, who volunteered for the tests. The best results, as measured by rapidity of healing, absence of symptoms and freedom from all complications were encountered in the group treated with a sulfonamide-impregnated plastic film, similar to that described above. Eschar-forming, burn-treating preparations gave poor results; providing further evidence that they be abandoned for such purposes. The importance of restricting the frequency of dressings was further confirmed.

Potassium Bicarbonate During Sulfa Therapy

To prevent urinary tract complications, many workers have recommended the routine use of alkalies, in the form of sodium bicarbonate orally or sodium lactate parenterally as an adjuvant to sulfonamide therapy. It is known, however, that the administration of large doses of a sodium salt may, in certain types of patients, result in the retention of water in amounts that may be serious and even dangerous. This may be expected particularly in patients with cardiac, renal or hepatic insufficiency of even mild degree and often occurs in pregnant women.

In the *New England Journal of Medicine* (231:381, 1944) J. Ohnysty and W. Q. Wolfson present evidence that these difficulties may be overcome by substituting potassium salts, particularly potassium bicarbonate, for sodium salts in alkalinizing patients during sulfonamide therapy. The use of potassium bicarbonate has the advantage of producing the same alkalinity in the urine and at the same time having a diuretic effect, instead of the water-retaining tendency of sodium salts. This substitution has proved effective in the treatment of patients with severe heart damage who were receiving sulfadiazine for pneumonia. At present the potassium salt is being given to all patients with severe cardiovascular disorders whenever they receive sulfonamides but its use is being extended to milder cases as prophylaxis against decompensation. Ten grams are given with the initial dose of sulfonamide and 2.5 Gm. every four hours thereafter until twenty-four hours after discontinuance of chemotherapy. Although apparently of low toxicity, the authors advise against the use of potassium bicarbonate when severe renal impairment or adrenocortical insufficiency is suspected.

Factors in Heartburn

In a most interesting paper, W. C. Alvarez (*Gastroenterol.* 3:1, 1944) summarizes the results of questioning 123 persons with heartburn. The sensation consists of a burning and sometimes painful or rending distress, which begins usually under the lower end of the sternum and sometimes runs up as far as the pharynx. It tends to come in spells, and there are many curious and inexplicable features about its comings and goings. It does not appear to be due to any known organic disease of the digestive tract. At least 17 of the patients had or had had ulcer, but, curiously, when the ulcer was active and they had hunger pain they were free from heartburn. The symptom, therefore, did not seem to be produced by the ulcer. Heredity is sometimes a factor. Seventy-three per cent of the patients were men. Many of the patients suffered with regurgitation and belching, and these symptoms were occasionally associated with the heartburn, apparently only when the esophageal mucosa had been sensitized. When the esophagus was normal, regurgitation of acid gastric contents did not cause burning. Immediate causes of heartburn are eating too fast or too much or eating certain foods such as fats, coffee, onions, seasonings, radishes, tomato, orange, egg, cucumber, chocolate, peppers and cabbage. Alcohol and tobacco can be important factors, as can be emotion. Lying down or bending or exercising may bring on heartburn. The degree of acidity of the gastric contents is apparently not important, and heartburn can trouble persons with achlorhydria even to histamine. Sodium bicarbonate commonly gives relief, partly through neutralizing acid in the esophagus and the stomach and partly by causing waves of reverse peristalsis to run out and stop coming. The evidence obtained in this study fits with that obtained by experimenters and suggests that heartburn is due largely to regurgitation into a sensitized esophagus and partly to reverse waves of peristalsis coming up from the stomach.

Sensitivity to Thiamin

Evidently a rare occurrence, W. Stein and M. Morgenstern (*Arch. Int. Med.* 20:826, 1944) report what seems to be the third recorded instance of sensitivity to parenterally-administered thiamin. Giving full details of the case, they observed that the response of this patient to parenteral administration of thiamin hydrochloride followed the familiar pattern of sensitization to proteins, particularly horse serum. According to these authors, examination of the complex empirical formula for thiamin hydrochloride would place it in the protein group.

On the basis of their own and previously reported cases, Stein and Morgenstern reaffirm the advisability of making an intradermal test with thiamin hydrochloride piror to its parenteral administration, particularly when the individual has previously received it by this route.

Vitamin P in Ophthalmology

In the *British Journal of Ophthalmology* (28:336, 1944), W. R. Mathewson states that he has employed vitamin P with satisfactory results in two cases of ocular hemorrhage. The first patient had extensive retinal hemorrhages and nasal and bladder hemorrhages, but on giving vitamin P the nasaland bladder hemorrhages ceased, no fresh retinal hemorrhages occurred, and those present became absorbed. The second patient had recurrent hemorrhage into the anterior chamber after extraction of a cataract, but on receiving vitamin P there was no recurrence, and the iris, which had become muddy, rapidly cleared. The eye rapidly took on a healthy tone and the patient improved greatly in general appearance and mental agility. According to Mathewson, the evidence in these two cases suggests that vitamin P is of value in opthalmology.

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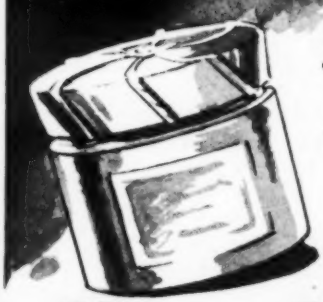

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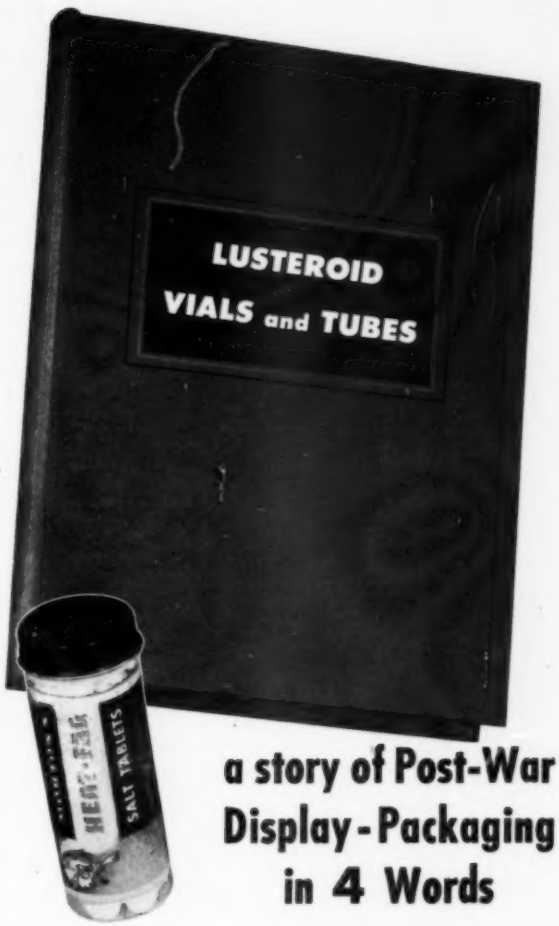

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Bromelia and Yara Yara

The shortage of many aromatic chemicals and essential oils has resulted in the adaptation of varied materials depending upon their availability and many scents of today have been governed by this factor. Bromelia and Yara Yara have found important places in many of the inexpensive formulations and have remarkable odor value for orange blossom and heavy oriental bouquets. Bromelia is known as B-naphthol-ethyl ether. It has a melting point of 37° C. and a fruity orange blossom odor very persistent in character. It has a finer and more delicate aroma than Yara Yara and can be used in the compounding of more expensive formulations.

Yara Yara, known as B-naphthol-methyl-ether, is excellent in certain types of soap odors having an orange flower type of odor and excellent fixative properties. It melts at 72° C. and finds a wide use in incense because of its strong and lasting aroma. There is a decided tendency throughout the industry to confuse these materials because of their similarity of chemical structure but their uses differ widely depending upon the product for which they are to be used.

Perfumer's Shelf

Aegle Marmelos Bark Principles

In reporting on the active principles of the bark of *Aegle marmellos*, Correa, A. Mookerjee (*Current Sci.* 12:209, 1943) states that young bark of both Bengal and Bihar origin yields (a) a coumarin (0.03 per cent), melting point 103° C., (b) an alkaloid (0.003 per cent), melting point 175° C., and (c) umbelliferone. Old bark of both regions yield umbelliferone and 0.6 per cent of a different coumarin with a melting point of 187-8° C. Old Bengal bark yields the same alkaloid as the young bark, but old Bihar bark yields 0.3 per cent of a new alkaloid, with a melting point of 142° C.

Essential Oils of Hungarian Camomiles

P. Rom and M. Hubatsek (*Ber. ungar. pharm. Ges.* 18:445, 1942, through *Chem. Abstr.* 38:5639, 1944) report that Hungarian camomiles of 1942 are rich in essential oils. Moreover, artificial drying, if properly done, does not diminish the yield. For testing the quality of the camomiles, they advocate that the essential oils, ash, sand and furthermore, the odor, extraneous parts and the amount passing through a 2-millimeter sieve should be determined.

Oil Content of Thymus Vulgaris

In discussing yields from *Thymus vulgaris* L., C. Rosenthal (*Pharm. Ind.* 10: 22, 1943) reports that the content in essential oil varies widely among single plants of this species; the maximum quantity of oil found being 2.6 per cent. It has been observed that the second cut gives a higher yield than the first one and that in the course of the day the maximum was obtained during the early afternoon.

Constituents of Irish Lichens

In a paper on the chemical constituents of Irish lichens, D. Murphy, J. Keane and T. J. Nolan (*Sci. Proc. Dublin Soc.* 23:71, 1944) report that continuous extraction with acetone for twenty hours of the lichen *Lecanora parella*, collected in the counties of Dublin, Sligo and Clare, gave a light brown crystalline deposit in the receiver, which after filtration, washing with alcohol and rinsing with hot acetone, yielded, after two recrystallizations from boiling acetone (80 per cent.), 1 per cent of the weight of lichen used, of fine white crystals of variolaric acid, m.pt. 296° C. with decomposition. Variolaric acid, $C_{16}H_{10}O_7$, contained no methoxyl group, suffered hydration in potassium hydroxide solution (10 per cent), gave a diacetyl derivative on acetylation, a dimethyl derivative with diazomethane which was not demethylated on prolonged boiling with potash, a methyl ester with methyl alcoholic potash which gave on treatment with diazomethane a product containing four methoxyl groups, and orcin and α-resorcylic acid on fusion with potash. Extraction with alcohol of the air-dried acetone-extracted lichen gave a green extract from which a brown gum was obtained on evaporation of an aqueous extract, and from which on treatment with methyl alcohol, crystals of mannitol m.pt. 162° to 163° C. were obtained.

Indian Perfume Production

According to a note in *S.P.C.* for July 1944, Dr. Sadgopal has recently compiled some further information on the manufacture of aromatic products in India. Sandalwood oil is being distilled not only by the famous Mysore Government factory but also by four other organizations. At Rao in Indore State two factories are now handling the oils of ajowan and dill distilled on the spot. Thymol is isolated from the oil of ajowan and the product is of fairly good quality. Camphor and camphor oil are being produced in Coonoor and a synthetic camphor plant is now being worked in Bombay. Hand-pressed citrus oils are turned out by one company and a commercially successful distilled lime oil by two others.

Sadgopal feels that the local Bharatpore government has failed to take the opportunity of properly organizing the Indian vetivert (khus) oil industry. In contrast, at Yercaud in South India, planters are growing good quality imported geranium plants from which oil geranium has already been distilled. Although this oil does not possess the sweetness and uniformity of note obtained in oils from the Himalaya valleys, these efforts have given a lead to the country in planting geranium plants in South India, and the progress is being watched with great interest by the Indian industry. In Bangalore, substantial quantities of linaloe oil of very good quality is being obtained from trees grown from seeds imported from Mexico.

In his paper, Sadgopal also referred to Indian eucalyptus oil, artemesia oil, "tulsi" and "tirphol" oils, and to the indigenous production of some of the better known synthetic aromatics and isolates.

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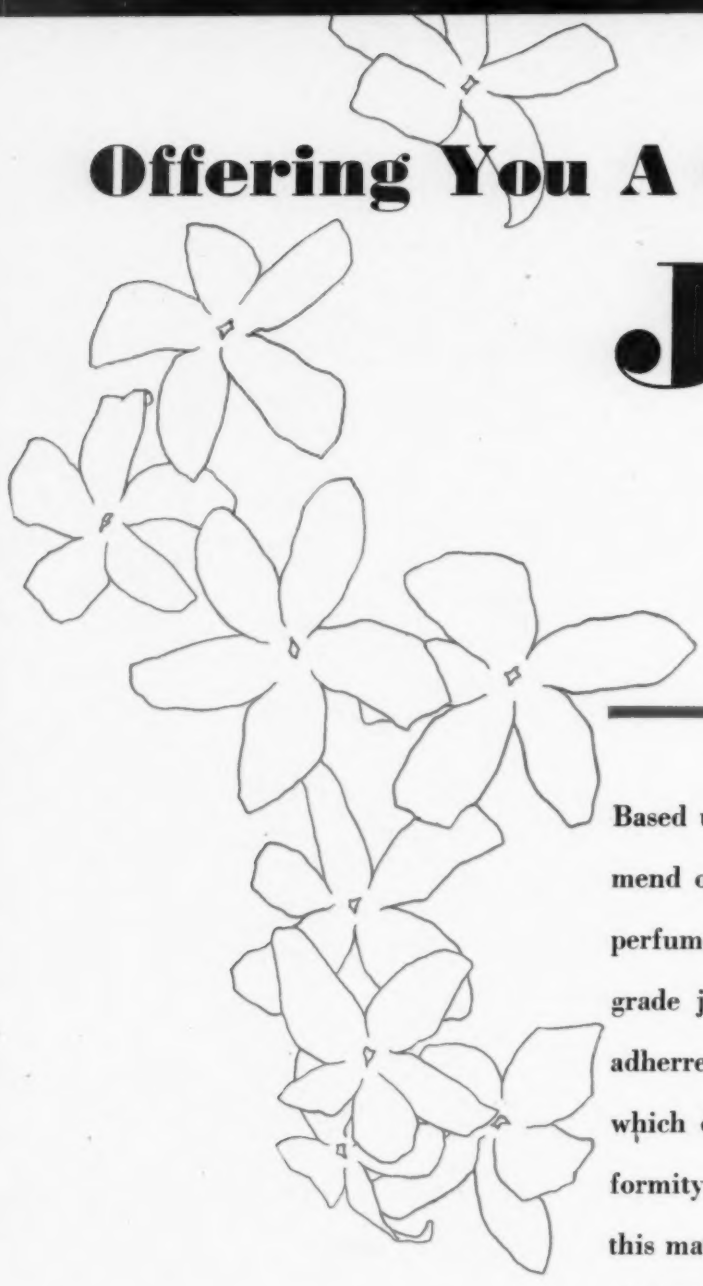

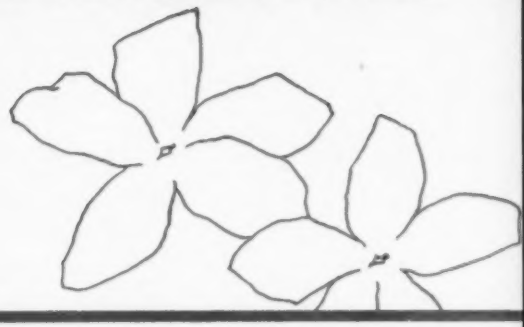

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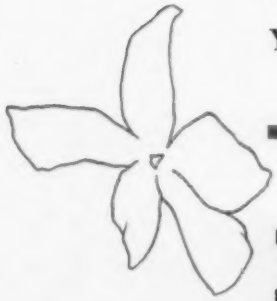

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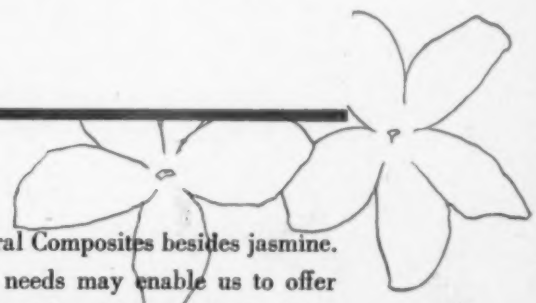

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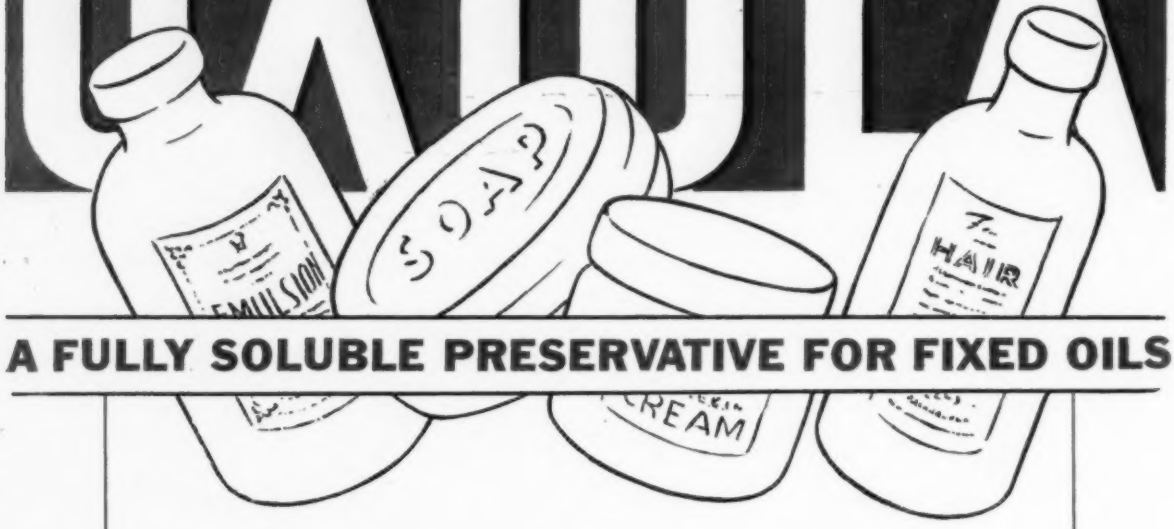

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Laurel Water Decomposition

According to O. de Almeida Costa and O. A. de Souza (*Pubs. farm.* (Sao Paulo) 9:No. 35, 1944), laurel water is quite unstable and the hydrocyamic acid content diminishes under the influence of a variety of factors. Hence the authors recommend its replacement by a solution containing: 50 cc. of an aqueous solution of 2 per cent of hydrocyanic acid; 3.5 cc. of benzaldehyde; dilute hydrochloric acid to bring the pH to 4.5; and sufficient water to make 1 liter.

Changes in the Curing of Vanilla

The distribution of gluco-vanillin and of a β-glucosidase in the vanilla bean and the effect of maturity on the amount of gluco-vanillin and on glucosidase activity have been determined by F. E. Arana (*Food Research* July-Aug. 1943). On the basis of present knowledge, the process of curing vanilla beans can be elucidated in some further detail than was possible previously. From considerations of quality as well as from analytical criteria, it is quite certain that the gluco-vanillin-vanillin transformation is not the only important one that occurs during curing. From lack of knowledge of other changes, however, principal consideration can now be given only to the vanillin-forming reaction. In the bean itself most of the gluco-vanillin is present in the fleshy part or ovary wall where the β-glucosidase that catalyzes the hydrolysis of the glucoside is also located. In regard to the extent of hydrolysis of the uncured bean at various stages of maturity, it is known that in mature beans the vanillin exists almost entirely as the glucoside. In approaching the chocolate stage more gluco-vanillin is formed, and all of it proceeds to vanillin. In a parallel manner the activity of the enzyme starts at zero in the green stage and increases with maturity. In the chocolate bean it apparently decreases. The activity of the remainder of the enzyme system during maturation is not known. Curing the green beans, which has been observed to result in a product of low vanillin content, is therefore due to the lack of β-glucosidal activity, but the fact that the product is of passable quality indicates that changes other than that of gluco-vanillin to vanillin are important in the curing. Curing blossom-end-yellow beans in which the enzyme activity is appreciable results in an excellent product with high vanillin content. During the first stages of the curing process gluco-vanillin is hydrolyzed to vanillin. The further changes that contribute to quality take place very slowly during the conditioning stage. It is of interest to note that beans can be aged before curing to allow their enzyme activity to increase far above that of the green beans and that if beans have passed the high activity stage, they can be heated to rejuvenate the enzyme system to a certain extent.

Piperitenone

In 1942, Y. R. Naves (*Perf. & Essent. Oils Rev.* 35:224, 1944) found in oil of pennyroyal of Moroccan origin about 24 per cent of a mixture of two ketones $C_{10}H_{14}O$, piperitenone and isopiperitenone, the latter in smaller proportion. Piperitenone was isolated in the pure state. Since then this ketone has been identified in proportions which vary but are always less than 30 per cent in numerous lots of this oil.

The principal physical properties of this ketone were found to be as follows:

B.P. at 10mm. 106-107°; d_4^{20} 0.9774, n_r20 1.54273; n_D20 1.52942; n_C20 1.52393; $(n_r - n_C) \times 10^4$ 188.0; EM_D = + 2.24.

The ketone was purified by means of its hydrogensulfite compound, which is soluble in excess of sodium sulfite solution. It combines slowly with hydroxylamine. This characteristic and the reaction with sodium sulfite have been utilized in the analysis of pennyroyal oil.

The structure of piperitenone is shown by hydrogenation to menthone and menthol and by isomerization to thymol. Hydrogenation in presence of catalysts (nickel or palladium) leads to the simultaneous formation of men thones and of thymol by dismutation. Isomerization to thymol is obtained with good yields by the action of catalysts, nickel, palladium or charcoal carrying palladium—in the absence of hydrogen by simply heating. It may be compared with the conversion of ombellulone to thymol or of carvone to carvacrol.

From the technical viewpoint piperitenone may be considered as a source of thymol and of inactive menthols. The production of both of these is easy. Its odor is disagreeable and its presence diminishes the value of a pennyroyal oil for the perfumer. However, it is easy to separate other important constituents from the oil by careful distillation for its boiling point is about 10°-12° higher than that of pulegone with which it does not form any azeotropic mixture.

Oil of Pennyroyal

Because of shortages of other, more familiar sources of menthol, says Y. R. Naves in *The Perfumer and Essential Oil Record* (35:221, 1944), European workers have begun to turn to long neglected sources, and particularly to the treatment of oil of pennyroyal.

It appears that for the whole of the Iberian Peninsula the production of oil has increased to five or six times the prewar figure when the oil was almost entirely consumed by the soap makers. This increase has been obtained by exploiting, not only new valleys in which the plant is found abundantly, but also slopes and dry uplands on which a sparse growth of pennyroyal is intermingled with large proportions of other Labiatae. Among the Labiatae which may be mixed with these by lack of care in the harvesting are *Teucrium marum* L. (*Chamaedrys marum* Moeuch) whose odor is very similar to that of pennyroyal, and *Nepeta cataria* L. (Cataria *vulgaris* Moeuch) or catmint. Both of these contain bitter substances whose presence is most undesirable in oils intended for the production of menthol. The harvesting has brought into work plants in various stages of growth and has often been carried out with insufficient care. The distillation has been entrusted to unskilled hands and carried on in such apparatus as was found available, often ill-adapted to the purpose. Moreover, in order to augment the yield, drying of the herb to increase the density of the charges has become general.

These various factors, working together, have caused the appearance on the market of many parcels of oil having unusual or hitherto unpublished characteristics. In view of this fact and of its effect on the distinction of the oils it has become necessary to undertake the revision and improvement of the methods of analysis. In this work definite technical and scientific progress has been made, and Naves discusses this in some detail. From his findings, Naves feels that a careful analysis of oil of pennyroyal must comprise as a minimum the following physical and chemical determinations: Specific gravity; index of refraction; dispersion F-C; rotatory power; percentage of ketones by the Burgess process and by oximation; fractional distillation. Should the sample available be very small, determine the index of refraction, the dispersion and the percentage of ketone by oximation and distil into two fractions instead of four, determining the refractive index and dispersion on each fraction.

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Compounder's Corner

Monoacridine Antiseptic Preparations

The five isomeric monoamino compounds of acridine are of interest as antiseptics, but, writes S. M. Phillips (*Manuf. Chem.* 15:318, 1944), 5-aminoacridine is particular valuable. Its hydrochloride, known commercially as acramine yellow, is a pale-yellow powder with solubility in water of one part in 300. Investigations indicate that 5-aminoacridine is less powerful than either proflavine or acriflavine against Gram-positive bacteria, but more powerful than proflavine and only slightly less powerful than acriflavine against some Gram-negative bacteria.

Toxicity of 5-aminoacridine is low. Subcutaneous injections in rabbits of a solution of 1 in 200 produced only local irritation in the area of injection. This cleared up in a few days, leaving only a slight skin discoloration. Proflavine under similar conditions gave necrosis and ulceration lasting fourteen days. Its systemic toxicity is between that of acriflavine and proflavine. These properties and its non-staining of the skin and only slight staining of cloths suggests its use as a general antiseptic, and it has been suggested for use in infections of the nasal and auditory passages and of the larynx.

Preparation of an isotonic solution of 1 in 1,000, buffered to *p*H 6.8, has been made up as follows:

5-aminoacridine hydrochloride	**0.1 Gm.**
Borax	**0.05 Gm.**
Boric acid	**1.2 Gm.**
Sodium chloride	**0.3 Gm.**
Water	**ad 100.0 cc.**

the solution being stored in an amber bottle.

A modification of this has been made up, having the formula:

5-aminoacridine hydrochloride	**0.1 Gm.**
Boric acid	**1.2 Gm.**
Sodium chloride	**0.3 Gm.**
Borax	**0.5 Gm.**
Aluminum acetate	**0.5 Gm.**
Water	**ad 100.0 cc.**

This was used as a mouth wash for sore gums and after recent extractions, its mild astringent action proving beneficial.

For a general disinfectant in baths and washing basins the following alkaline preparation has been used with approval of its softening action on the water:

5-aminoacridine hydrochloride	**0.2 Gm.**
Sodium bicarbonate	**5.0 Gm.**
Borax	**0.5 Gm.**
Liquid lorol	**10.0 cc.**
Water	**ad 100.0 cc.**
Perfume	**q.s.**

The result is a pleasantly colored and mildly perfumed preparation with powerful antiseptic properties.

An antiseptic cream of the vanishing cream type has been used and found useful in speedy healing of scratched pimples, cuts, and the like; such a product having the following composition:

Stearic acid	**140.0 Gm.**
Potassium hydroxide	**3.0 Gm.**
White mineral oil	**50.0 cc.**
Witchhazel extract	**90.0 cc.**
Glycerin	**90.0 cc.**
5-aminoacridine hydrochloride	**0.7 Gm.**
Water	**350.0 cc.**

It is filled into amber jars. The result is a faintly yellow cream, of soft texture, which rubs well into the skin, leaving no perfume and no stickiness

Lipstick Manufacture

In a summary of current practices in liptsick manufacture, K. N. Richardson (S.P.C. 17:584, 1944) notes that disadvantages to avoid are crumbling, cracking, sweating, rancid off-odors, markedly non-indelible colors, dullness and tackiness. Too low a melting point is apt to give a thick, greasy, crumbly film on the lips, while too high a melting point leads to loss of spreading power and considerable difficulty of application.

A very good lipstick can be made with hydrocarbon waxes and oils as a basis, with very small additions of other materials not members of this family. Paraffin, petrolatum, mineral oil can, indeed, be made the basis for a proper lipstick when pigment colors alone are used. When dyes such as the commonly employed derivatives of fluorescein are used, a solvent for the dye must be included, as fluorescein derivatives are not soluble in hydrocarbons. Castor oil, the most commonly used solvent for the fluorescein dyes (commonly called bromo acid), is not miscible in mineral oil, and, as a consequence, it is necessary to resort to other solvents such as butyl stearate. Even this would not stay in hydrocarbon mixture, so it would be necessary to add a binder such as ethylene glycol or triethanolamine. Lipsticks of this character are rather more difficult to make than those of vegetable or of mixed origin.

Because the addition of a substantial percentage of insoluble pigments tends to harden the stick and reduce its spreading characteristics, many manufacturers use a softer base. That is, they modify the basic formula by reducing the wax content a few points, increasing the oil by a like amount. Still other manufacturers accomplish the same result by adding to the basic lipstick formula a color base made by grinding the pigment color in a low melting point petrolatum or lard.

The trend seems to be towards more lifelike tones in lipsticks and rouges. Color manufacturers have to a great extent met this demand by developing lakes and toners which have a blood red or an orange background rather than the bluish tinge which characterizes the older type colors. Various other fluorescein derivatives have been tried as a substitute for tetra-brom fluorescein, in order to get away from the blue undertone of the latter, and there appears to be a strong possibility that this difficulty will be overcome in the future.

The equipment used in lipstick manufacture is very simple; likewise the procedure involved. The dye, bromo acid, is dissolved in castor oil or other solvent, heated in the case of castor oil to about 160° F. The other oils and fats are added, together with the beeswax. Some manufacturers melt the waxes separately and stir them into the hot oils. The simplest procedure is usually best. When pigment

Fashion Forecast

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Preparing Ointments

Smooth ointments depend upon the solubility or state of fine dispersion of the active ingredients in the fatty bases. This factor is stressed by J. Buchi and R. Schlumpf (*Pharm. Acta. Helv.* 18:673, 1944), who give the percentage solubility of a number of fat-soluble medicinal substances in the following table:

	In soft white petrolatum	*In hydrogenated peanut oil*
Salicylic acid	0.03 to 0.06	1.5 to 2.0
Ethyl p-amino-benzoate	0.05 to 0.1	0.5 to 1.0
Atropine base	0.02 to 0.04	0.5 to 0.75
Cocaine base	0.25 to 0.5	1.75 to 2.0
Camphor	14 to 15	20 to 21
Diacetylaminoazo-toluene	0.1 to 0.5	1.5 to 2.0
Ephedrine base (hemihydrate)	0.75 to 1.0	9.0
Iodochlorhydroxy-quinoline	insoluble	0.25 to 0.4
Iodoform	0.8 to 1.0	—
Iodine	0.8 to 1.0	over 6
Menthol	18 to 20	17 to 18
Methyl p-hydroxy-benzoate	—	1.25 to 1.5
Naphthol	0.1 to 0.13	7.0 to 7.5
Phenol	0.5 to 0.75	14 to 15
Pyrogallol	insoluble	2.25 to 2.5
Resorcin	insoluble	5.75 to 6.0
Sulfur, precipitated	0.25 to 0.5	0.25 to 0.3
Thymol	5.8 to 6.0	29 to 30

These workers emphasize that only when the solubility limit is not exceeded should an ointment be prepared by heating, as otherwise the dissolved substance is liable to crystallize out in time in the form of large crystals. The use of organic solvents to dissolve the medicament is open to the same objection, since the heat required to remove the solvent produces a super-saturated solution. Ointments containing substances having a low solubility in the base should be prepared by rubbing the substance, in a fine state of division, with the base in the cold. Prepared in this way, the maximum particle size is about 5 to 50μ, whereas ointments which have crystallized out show large particles of up to 500μ. Even when an ointment is prepared in the cold, and kept in a cool place, there may be a gradual increase in the size of the crystals.

Improved Sulfur Preparations

Sulfur is one of the most useful preparations available to the dermatologist, but many preparations containing sulfur leave much to be desired. Using two popular types of preparations as examples, J. G. Downing, L. M. Ohmart and M. J. Stoklosa (Arch. Dermat. & Syph. *50:8, 1944 set out to remedy the situation. Using methyl cellulose instead of tragacanth as the suspending agent, they developed the following lotion:*

Precipitated sulfur	**10.0 Gm.**
Spirit of camphor	**10.0 cc.**
Alcohol	**80.0 cc.**
Solution of methyl cellulose, 2%	**30.0 cc.**
Rose water, to make	**240.0 cc.**

In contrast to the curdy mixtures ordinarily seen, this product has a smooth, creamy appearance. The medicaments are finely divided and hence act more efficiently.

Sulfur-salicylic acid combinations, among the most widely used in dermatology, are often dispensed in petrolatum; such ointments being exceedingly greasy and with a pronounced odor of sulfur. A preparation with none of these disadvantages is given as follows:

Precipitated sulfur	**2.0 Gm.**
Salicylic acid	**2.0 Gm.**
Oil of rose	**0.25 cc.**
Non-greasy base, to make	**30.0 Gm.**

The non-greasy base is prepared from:

Sodium lauryl sulfate	**0.8 Gm.**
Cetyl alcohol	**15.0 Gm.**
Glycerine	**5.0 cc.**
White petrolatum	**14.0 Gm.**
Water	**35.0 cc.**

The non-greasy character of this ointment makes it comparable to a cosmetic and permits its use on areas at times not suitable for a greasy preparation. Since it is of the so-called washable type, it is easily removed from body surfaces, even hairy parts. The addition of a perfume oil, like oil of rose, helps to disguise the distasteful sulfur odor.

Skin Protective Preparations

In presenting formulas for a series of skin protective preparations for home, office and factory use, H. Goodman (*N.Y. State Pharm.* 19:31, Aug. 1944) points out that the invisible glove protective covering has appealed to many as offering some measure of help in warding off noxious materials. He stresses, however, that the nature of the poison, the nature of the protective and the nature of the skin must be considered. It should never be forgotten that the protective itself may cause unwanted response of the skin.

Following are the several preparations suggested by this well-known dermatologist:

SOAP CHEMICAL INVISIBLE GLOVE

Stearic acid	**20.0**
Mineral oil (low viscosity)	**10.0**
Triethanolamine	**1.0**
Water, to make	**100.0**

Melt the solid, add to mixture of warmed fluids and mix intimately.

SOAP CHEMICAL INVISIBLE GLOVE *PLUS* PHYSICAL GLOVE

Stearic acid	**10.0**
Mineral oil (low viscosity)	**5.0**
Triethanolamine	**0.5**
Water, to make	**50.0**

Melt solids, add to mixture of warm fluids; mix intimately with the following mixture:

Bentonite	**10.0**
Water, to make	**50.0**

Heat to run through homogenizer or ointment mill.

NON-SOAP CHEMICAL INVISIBLE GLOVE

Octyl-stearyl alcohol	**16.0**
White petrolatum	**8.0**
Hydrogenated cottonseed oil	**8.0**
Stearic acid	**8.0**
Water, to make	**100.0**

Heat with constant stirring.

NON-SOAP NEUTRAL CHEMICO-PHYSICAL INVISIBLE GLOVE

Mineral oil (low viscosity)	**20.0**
Glyceryl monostearate	**12.0**
White petrolatum	**20.0**
Water, to make	**100.0**

Heat with constant stirring.

PHYSICAL INVISIBLE GLOVE

Bentonite, best white U.S.P. Grade	**20.0**
Water, to make	**100.0**

Dust powder on water, stand for 12 hours, and agitate.

PHYSICAL INVISIBLE GLOVE

Starch	**10.0**
Water, to make	**100.0**

Rub starch in cold water until smooth, heat with constant stirring.

PHYSICAL INVISIBLE GLOVE BASE

Bentonite	**25.0**
Zinc oxide	**25.0**
Cottonseed oil	**25.0**
Hydrogenated cottonseed oil	**25.0**

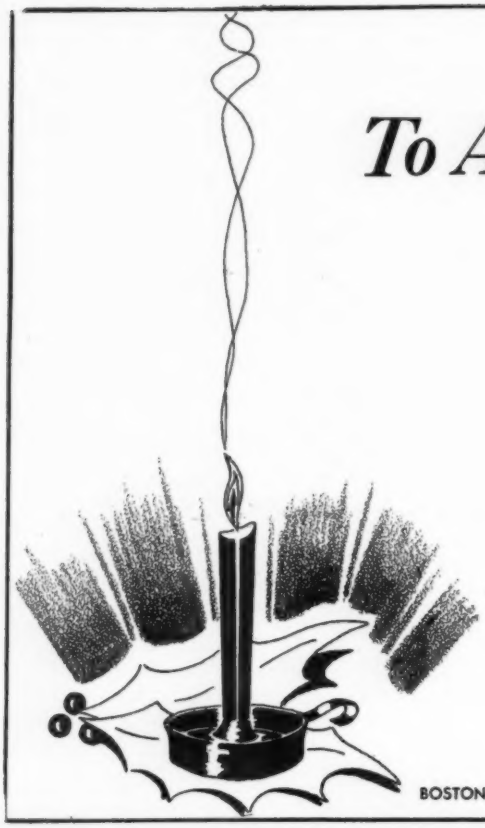
Mix intimately.

New Use for Lanolin

A note in the October 7, 1944 issue of Science News Letter *tells us that cuts and wounds on oak trees, properly treated with lanolin, heal in half the time required by untreated wounds.*

Oils for Intramuscular Injections

According to a note in *Modern Medicine* (12:95, Sept. 1944) the efficacy of four oils—corn, peanut, sesame and cotton seed—has been evaluated by W. E. Brown and his associates in an effort to determine the best medium for intramuscular injections. Twenty patients received two injections of each oil at weekly intervals over a two-month period. Evaluation of the findings showed that sesame oil and corn oil were more stable, more quickly absorbed, less irritating and less antigenic than peanut and cotton seed oils.



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PURCHASING DEPARTMENT

Drug and Cosmetic Manufacturers To Get More Alcohol; Critical Phase of Program Practically Over

An immediate release of approximately 2,000,000 gallons of 190 proof ethyl alcohol for non-beverage civilian use as a supplement to the fourth-quarter allocations of industrial alcohol has been announced by the War Production Board. This action is contained in Direction 2 to M-30, governing the allocation of ethyl alcohol.

According to the provision of the direction, additional quantities of alcohol will be made available to the producers of drugs and pharmaceuticals; food products, including candy, glazes, flavoring extracts and vinegar; toiletries and cosmetics, including mouth washes and oral antiseptics; adhesives; photographic materials; duplicating inks; brake fluids, and to other normal users of ethyl alcohol whose consumption has been restricted.

Without any limitations as to past use, resellers and users who may desire to purchase additional quantities of alcohol should place purchase orders for such requirements with their suppliers, WPB said. The supplier's ability to complete delivery, in whole or in part, of all orders for alcohol placed with him will depend upon the amount of alcohol that may have been released to him for specific end uses.

The present supply and demand pattern indicates the most critical phase of the alcohol program is practically over. Requirements for industrial alcohol for 1945 are estimated at 536,000,000 gallons of 190 proof alcohol, as compared with a potential supply of 607,000,000 gallons, if all facilities operate at capacity and expected imports materialize, WPB said. Government stocks of alcohol including both the reserve stockpile and working stocks, were about 64,000,000 gallons on November 1st. WPB explained that the improved alcohol situation is to a large extent the result of a reduction in alcohol requirements for synthetic rubber.

During the first nine months of 1944, 112,000,000 bushels of grain were used for alcohol production, yielding 274,000,000 gallons of alcohol. Of this grain, 70 per cent was wheat, 3.7 per cent corn, 5.2 per cent rye, 9.9 per cent malt, and 5.2 per cent other grains.

Molasses supplies for alcohol production will be extremely limited in 1945, WPB said. It is expected that distillers on the East Coast will be required to operate exclusively on grain for industrial alcohol production next year.

NOVEMBER PRICE CHANGES

UP

Anethol 50c
Elm bark 2c
Kamala 5c
Mercury metal $4
Papain 15c
Sarsaparilla root Mex. 1c
Senega root 5c

DOWN

Arnica flowers 5c
Arrowroot ½c
Bergamot oil $18.75
Buckthorn bark 2c
Celery oil 50c
Colocynth pulp 10c
Damiana leaves 2c
Geranium oil, African 50c
Bourbon $2
Henbane leaves 10c
Karaya gum 3c
Lemon grass oil 15c
Menthol natural $1.50
Plantago seed 2c
Psyllium seed 5c
Sabadilla seed 2c
Stramonium leaves 1c

• Prices quoted in this section were current on the first of this month.

Lanoline Scarce

With production of lanoline running well below consumption, and continued heavy demands for the essential war work, there does not appear to be anything in the present market picture that would indicate an immediate relief in the shortage. Some factors point out that production has been running at the rate of approximately a quarter of a million pounds a month below consumption. Last releases of material for the cosmetic trade were made in October. No allocations have been granted for the cosmetic trade in November and it appears doubtful whether any will be made in December.

Glycerin Stocks Up

An ample supply of glycerin is expected to be available over the balance of the year, and it is estimated stocks at the close of December will amount to approximately a hundred million pounds which is sufficient to take care of consumers' requirements over a six month period. It is not likely the Government will require any additional quantities for Lend-Lease for the balance of the year and it is still too early to make any predictions as to how much if any will be needed early next year. Further sales have been reported by the Commodity Credit Corporation. A few weeks ago it was stated that CCC stocks had been reduced below 2,000,000 pounds and latest sales have further reduced the supply.

Menthol Down

Weakness in Brazilian menthol continued a feature in the spot market where prices showed a further decline to $14 per pound. Although most of the goods imported here have been purchased at high prices, the presence of good size stocks and a disappointing demand have served to carry the spot market down to the present level. Stocks are reported to be in the hands of a number of speculators as well as regular dealers, and as a result some holders are becoming rather impatient in the

(*Continued on page 731*)

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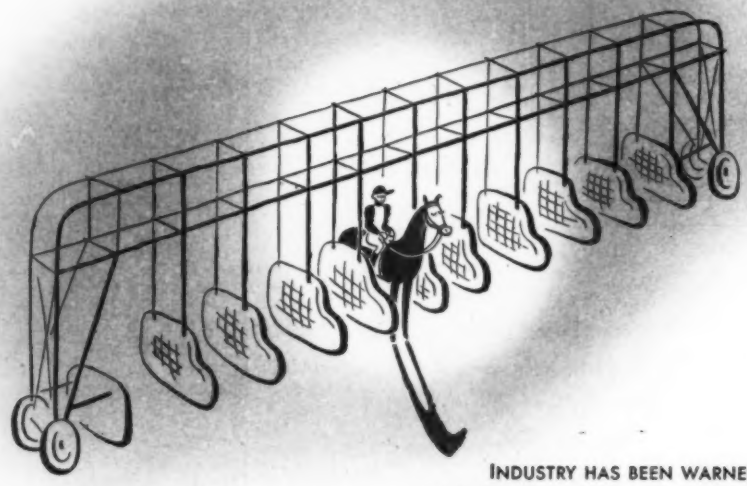

INDUSTRY HAS BEEN WARNED by Jesse Jones, U. S. Secretary of Commerce, that the war may end suddenly and business should, therefore, be preparing now for the Post-war period.

The Committee for Economic Development reports that cessation of hostilities in Europe will release 80% of the nation's war production capacity for reconversion for civilian use.

Mr. Jones' warning and the report of the Committee for Economic Development should serve as a double spur to all Post-war thinking. When restrictions are lifted from war-prioritied cosmetic ingredients, don't be caught flat-footed and left at the post.

The merchandising, packaging and production experience and facilities of Allied Products may be a source of guidance at this time for the all-important, fast get-away and quick sales pick-up when war production barriers are raised. Arrangements for consultation can be made at your convenience, and without obligation, at your office or at the Allied Office in the R.C.A. Building in New York City.

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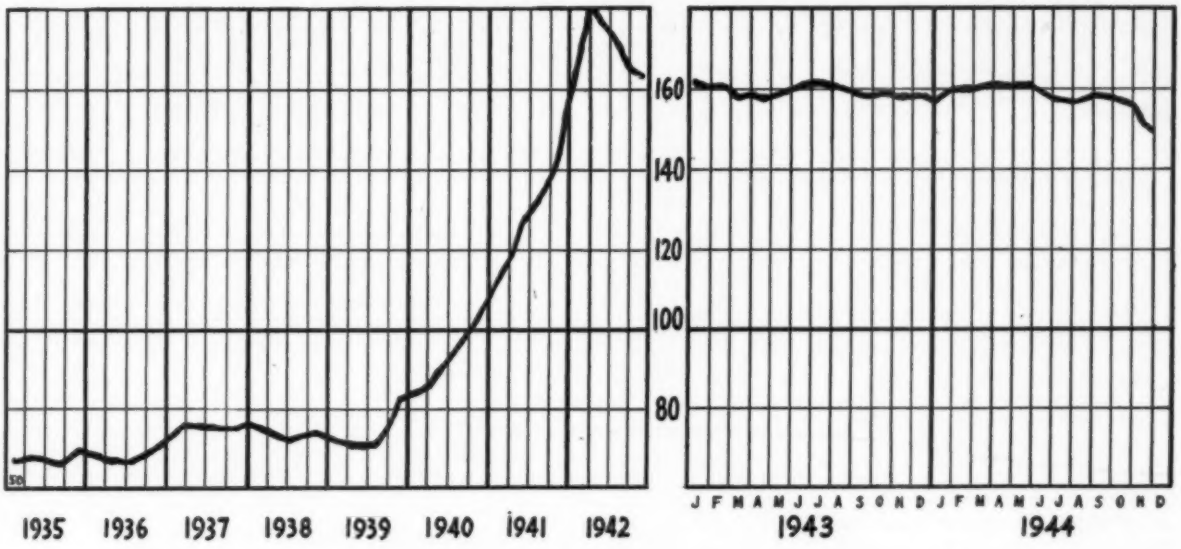
50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for November declined from 155.1 to 148.2.

Twelve Month Supply of Bergamot Oil Here; New Prices Represent Record Decline

The price at which 90,000 pounds of bergamot oil, recently imported from Italy by the U. S. Commercial Co., will be sold domestically has been set at $5 per pound, ex warehouse at New York, the Foreign Economic Administration said.

Bergamot oil, obtained from the rind of bergamots, a citrus fruit, is used as a base in eau de Cologne, lotions, hair tonics, and is valuable in soaps. No previous shipments of this essential oil had been received from Italy, the principal source of supply, since the United States entered the war. As stocks of this oil were depleted, the domestic price for the oil soared as high as $20 to $30 a pound.

The current shipment of 90,000 pounds of bergamot oil represents about a year's domestic supply in pre-war times. The United States has obtained about 50 per cent of Italy's present total supply of bergamot oil, the remainder going to Great Britain and the Soviet Union. Distribution among perfumers will be prorated on the basis of quantities purchased by these firms in the base period, 1936-40.

The present supply was purchased by the Allied Control Commission in Italy at FEA's suggestion several months ago, but delivery was delayed because of lack of shipping space.

Local dealers are generally offering Bergamot oil at from $6.50 to $7 a pound, representing a record reduction from the top prices quoted not long ago.

Rose Oil Production

Brazil's production of rosewood oil in 1942 amounted to 267 tons, valued at 39,253,000 cruzeiros.

Lemon Oil Tight

Lemon oil continued very tight. The tightness was caused by heavy consumption of available oil used to produce lemonade powders for the armed forces. To break the present shortage would require a large importation of Italian oil strictly for civilian use. Some lemon oil has reached here from Brazil and it is quite likely this material will meet with a ready sale in view of the exceedingly tight position of the California product.

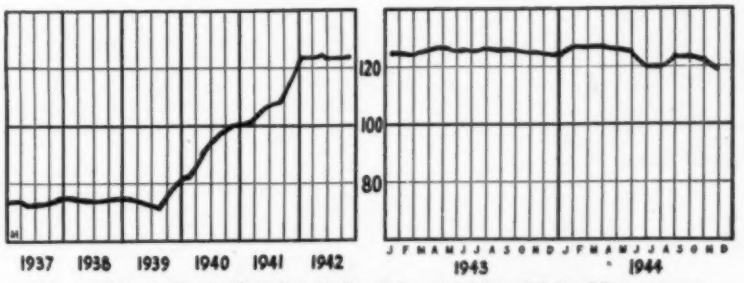
Geranium easy

A considerably easier undertone prevailed locally in the market for geranium oil. Although not all sellers are meeting minimum quotations, competition has increased and conditions were more favorable for buyers. African oil prices on spot ranged from $12 to $13 a pound, with Bourbon oil at a price range of from $11 to $12.

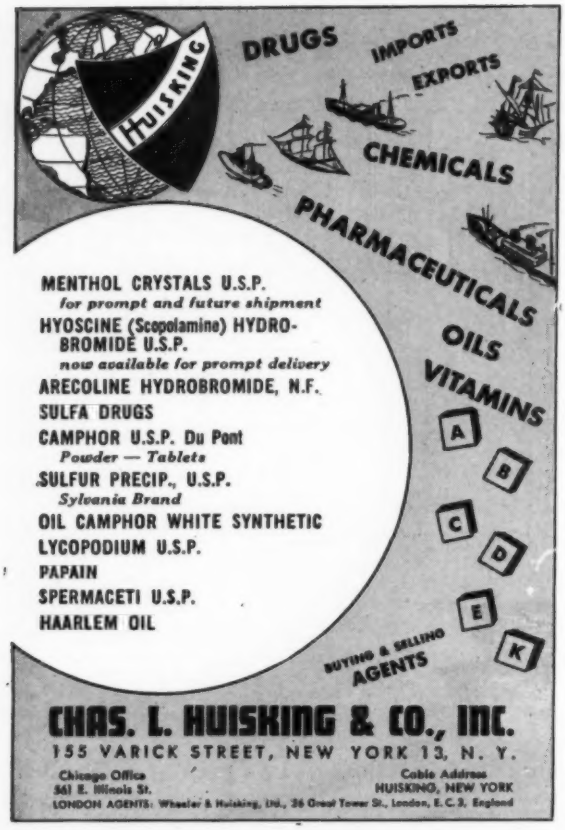
Miscellaneous

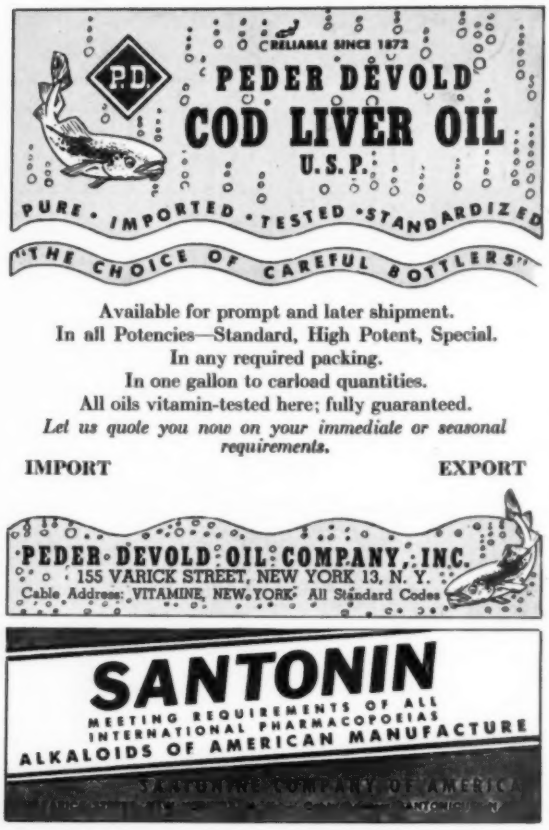
There is a fair supply of coriander oil available on spot, and, with a slower demand, some holders appear more anxious to move stocks. Current quotations on

15 Medicinal Chemicals—Weighted Price Index 1926=100.



The medicinal chemicals index declined from 126.0 to 123.9. Mercury was higher at $118 but menthol dropped to $14.

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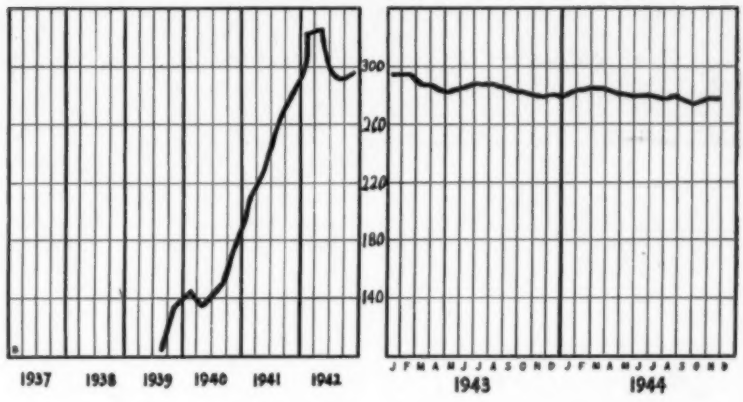
lemongrass oil are easy as the result of a better supply. The supply of orange oil available for immediate delivery is more than sufficient for the demand. Brazilian oil is offered quite freely and the supply of California oil appears sufficient for immediate requirements. A decidedly stronger tone prevails in peppermint on reports about the market to the effect that another sizable order is about to be placed by the Government. Although some trade factors attribute the upward tendency in anethol to the unusual circumstances that have prevailed in the basic material for more than a year, it is understood that a rather unusual demand has appeared for anethol recently, thus reducing available stocks to a minimum Clove oil is scarce. Some dealers are offering material for January delivery a $1.60 a pound, subject to safe arrival. Oils sandalwood, and patchoul a e scarce.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index remained without change at 276.2.

FINE CHEMICALS

(*Continued from page 728*)

light of an inactive demand and the fact that new production will shortly begin in Brazil for January-March shipment.

Regardless of developments in the primary center it is generally believed that unless present stocks are absorbed, spot prices will continue to decline. Trade factors believe that there are approximately twenty or more tons hanging over the spot market. With the heavy consuming season well under way, and large consumers well covered on their requirements, it may be necessary to carry a good portion of the material over until next year.

In view of recent importations trade factors believe that over 200 tons of menthol have been imported into the United States during the past eight months. This is approximately 20 to 25 tons more than the total Japanese or Chinese material consumed here prior to the war. Since the recent arrival of over 400 cases of menthol, representing an investment of about $500,000, it is estimated that about 40,000 pounds is available on spot.

Menthol of Chinese or Japanese origin sold at about $3.50 a pound before the war, whereas current prices on spot now range from $14 to $16.25. Such prices are said to have discouraged the use of menthol in this country.

Menthol from the new mint crop in Brazil will not be ready for at least another month or more and it is generally believed present spot holdings will continue to have an adverse influence upon the trend of the market here regardless of developments in the primary center.

Olive Oil Production Up

Production of olive oil in Spain has increased during the current year because of the exceptionally large olive crop, according to the foreign press. Shipments of edible olive oil from Malaga during June 1944, amounted to 8,794,488 kilograms compared with 3,809,946 kilograms in June 1943. Shipments in the first half of the current year totaled 41,456,955 kilograms compared with 21,359,723 kilograms in the corresponding period of 1943.

Mercury Up

The mercury market was strong in price and practically bare of spot stocks. Local sellers report forward delivery sales at prices equal to about $122 per flask, spot.

It is interesting to note how high mercury prices have brought about increased production in the United States. Production was expanded to 3,413,996 pounds in 1941, 3,864,296 pounds in 1942 and by 1943 it had amounted to 4,069,496 pounds, or about three times the 1938 output.

This is not a record for the United States, however, since in 1877, with a production of 6,074,000 pounds, the United States was responsible for two-thirds of the entire world production of this metal. Nevertheless, considering the long period of mercury production in the United States and the fact that a high production of the best ore has long been taken out, it is a very remarkable achievement to have been able to expand output again to some 55,000 flasks in a single year.

Miscellaneous

The tartrates are firm, although demand for the cream is not very brisk, and the acid appears to be in a somewhat better position that it was a few months ago. While local importers do not hold out much hope of obtaining cod liver oil from Norway for some time, current demands are being readily filled by a steady flow of material from Iceland and from domestic production. Reports in the market indicate some concern over the tight position of mercury. Other scarce items include hydrogen peroxide, acetone, methanol, and sodium perborate. Output of sulfa drugs declined 25,907 pounds in August. Stocks at the close of August totaled 1,353,723 pounds, a decline of 144,107 pounds from July stocks.

CRUDE DRUGS

Latest estimates place the production of vanilla in Mexico during the 1943-44 season at slightly more than 400,000 pounds. Preliminary forecasts are to the effect that the crop soon to be harvested will amount to about 150,000 pounds, one of the smallest in years, because of adverse weather conditions.

The State of Vera Cruz, which produces over 95 per cent of Mexico's vanilla beans, suffered from drought for several months, and it is possible that many of the older vines were killed. If so, production for several years will be affected, as 3 years are required from

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the time of planting to the time of flowering.

Vanilla is one of the few crops in Mexico of which the entire output is exported. Almost without exception, the output is sold to buyers in the United States. Therefore, it may be assumed that gross exports less tare (20 per cent) equals annual production.

The following table shows exports of vanilla from Mexico in the years 1940 to 1943 and the first 6 months of 1944:

Year:	*Pounds*[1]
1940	470,424
1941	573,039
1942	145,980
1943	402,388
1944 (first 6 mos.)	193,436

[1] Gross weight.

More Beeswax

The maximum price that importers may pay abroad for pure crude beeswax from Portuguese West Africa has been increased 2½c—or from 31¼c to 33¾c a pound f.o.b. port of origin—by an Office of Price Administration ruling, effective November 11, 1944.

The price that importers may charge for sales of the commodity in this country is also increased 2½c—or from 37½c to 40c a pound, f.o.b. U. S. port of arrival.

This country depends on imports for its supply of crude beeswax. Besides the peacetime requirements of the wax and candle industries, the War and Navy Departments are now large users of beeswax, and the present domestic stockpile of this important commodity has reached a critical low.

The previous price, which was established in 1942, has tended to create an abnormal differential between African and Western Hemisphere beeswax prices. The present amendment is designed to correct this condition and in doing so make available to American industry considerable quantities of needed crude beeswax.

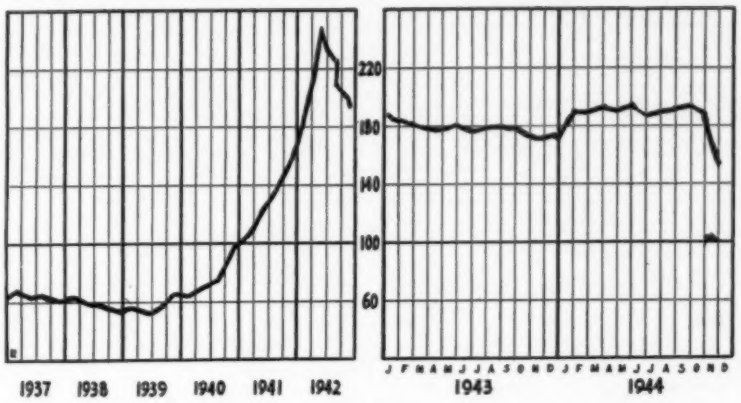
Ipecac Exports

Exports of ipecac from Nicaragua in August 1944 totaled 11,025 pounds. During the same month 3,879 pounds of balsam of Peru were shipped.

Miscellaneous

Buckthorn bark and juniper berries have been meeting with a better demand following reports to the effect that some new lots recently arrived from Russia. New lots of gentian root are offered at slightly lower prices in keeping with more favorable replacement costs. Spot supply of colombo root is small. New lots are on the way and are offered at 16c pending arrival. Because of a better demand, most cheap lots of papain have been taken out of the market, and it is believed spot prices will show a further advance. Kamala is in small supply. Replacements are likely to prove difficult because of a shortage of steamer space. Spanish saffron and Mexican sarsaparilla are firmer. Both articles are in poor supply. Spot quotations for stramonium were lower at from 21c to 22c a pound under competition. Senega root was higher at $1.10 to $1.15 a pound. Stocks were rather short and the replacement position failed to disclose large stocks in primary market.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index declined to 154.9 from the previous figure. The sharp decline reflects the revised price of bergamot but not the market in general.

Mint Oil Production

During the 1943-44 season, 300 tons of mint oil, or approximately 150 tons of menthol, were produced in the State of Sao Paulo, Brazil. It was reported in October that plantings for the 1944-45 crop had been delayed from 1 month to 6 weeks because of the unseasonable drought, but if the rainfall was adequate, mint production for the 1944-45 harvest would probably amount to 500 tons of crude oil or about 250 tons of menthol, according to officials of the Secretariat of Agriculture.

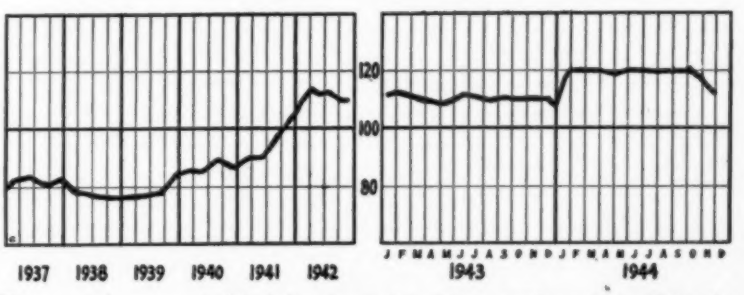
Essential Oils Study

Lester A. Barber, assistant chief of the Drugs and Pharmaceutical Unit of the Bureau of Foreign and Domestic Commerce, has been loaned to the Department of State by the Department of Commerce to make a first-hand survey of the essential oil situation in France.

While in France Mr. Barber will tour the Grasse regions in an effort to find out how much of the industry may have been destroyed by the war; whether the stills have been dismantled or demolished by the retreating Germans; whether the industry was able to save its stocks; and all other factors that may shed some light on the situation.

Mr. Barber is expected to be gone for two or three months and will make his report to the Department of State.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index dropped to 116.1. This was caused by the decline in menthol.

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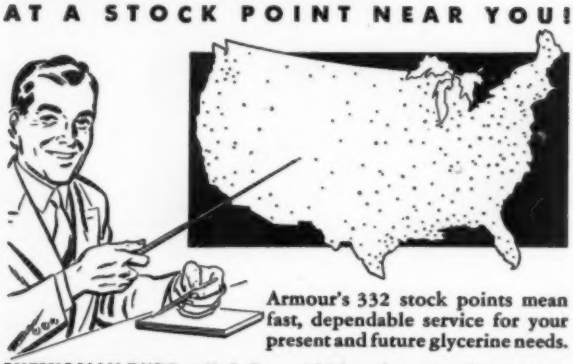

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Theoretical Chemistry, An Introduction to Quantum Mechanics, Statistical Mechanics, and Molecular Spectra for Chemists, by Samuel Glasstone, Formerly Research Associate of Princeton University and Professor of Chemistry in the University of Oklahoma, 515 pp., D. Van Nostrand Co., New York, $5.

Although a number of excellent books on quantum mechanics, statistical mechanics and molecular spectra are available, much of the material contained in them is not of immediate interest to the majority of chemists. The purpose of this book is to provide an introduction to certain aspects of these subjects that have a bearing on chemical problems. Such topics as the quantum theory of valence, the concept of resonance, the electronic configurations of molecules, the calculation of thermodynamic functions from spectroscopic data, dissociation accompanying light absorption, valence force constants, bond distances, and intermolecular forces, to mention a few, are of direct importance to chemistry. This book alone is not necessarily sufficient to supply the detailed instruction which would permit the reader to use quantum mechanics and statistical mechanics as tools for himself. Its primary object is to help him understand clearly how they have been employed by others to obtain results of chemical significance. At the same time, the knowledge gained from the present work will provide the foundation upon which may be based a more detailed treatment of the subjects to be found in the publications mentioned in the text and at the end of the preface.

The Adrenal Glands In Health And Disease, by Max A. Goldzieher, M.D., Endocrinologist, St. Clare's Hospital, New York, 727 pp., Illus., F. A. Davis Co., Phila., $5.

In this book, published 33 years after the author's first work on the subject, the clinical problems are approached on the basis of personal experience obtained by the study of endocrine patients. Recent developments in the field of histology and morbid anatomy as well as physiology of the pheochrome tissue were duly considered and the corresponding sections of the preceding edition brought up to date. The chapters dealing with cortical physiology, however, had to be completely rewritten; the classification of adrenal disease also underwent extensive changes, mainly by virtue of the insight gained into the physiologic and pathologic significance of the cortex. In the discussion of the diseases of the adrenals only such conditions have been included in which the primary significance of the adrenal glands is beyond contention. This restriction would eliminate a rather vast and fruitful field; namely, the participation of the adrenals in varied diseases of non-adrenal origin as well as the association of adrenal disturbances with abnormal environmental conditions. A special part of the book, entitled "Pathophysiology of the Adrenals," is devoted to the discussion of these associations.

Elimination Diets And The Patient's Allergies, by Albert H. Rowe, M. D., Lecturer in medicine, University of California Medical School, 2nd Ed., 256 pp., Lea & Febiger, Phila., $3.50.

The new edition of this work has been written with two objectives. It aims to stress the importance of food allergy in the production of allergic manifestations and to emphasize the value of the author's revised elimination diets for the determination of this condition. At the same time it discusses the other causes of clinical allergy and the latest methods for their diagnosis and control. So many revisions and additions have been made in the text that the work has been entirely reset.

Malaria: Its Diagnosis, Treatment And Prophylaxis, by William N. Bispham, Colonel, U. S. Army, Retired, 197 pp., The Williams & Wilkins Co., Baltimore, $3.50.

This work was designed to fill a need for a distinctly clinical treatise on all clinical aspects of the malarial problem. In addition to his own knowledge and experience of the subject gained during long years in the Army medical service, including tropical and semi-tropical areas, Colonel Bispham has had access to much up-to-date material and the cooperation of a number of experts. A special chapter on Prevention and Treatment of Malaria in West Africa in Recent Years gives a clear idea of the advances in treatment and prevention in that continent, which is the most important area of endemic and hyperendemic malaria. This chapter was contributed by Dr. L. T. Coggeshall, Professor of Preventive Medicine and Chairman of the Department of Tropical Diseases at the University of Michigan.

A Text-Book of Inorganic Pharmaceutical Chemistry, by Charles H. Rogers, D.Sc., Dean of the College of Pharmacy, and Professor of Pharmaceutical Chemistry, University of Minnesota, Third Ed., 704 pp., Illus., Lea & Febiger, Phila., $7.50.

The many changes included in the Twelfth Revision of the United States Pharmacopoeia and the Seventh Edition of the National Formulary are all reflected in the new third edition of this work. These changes have necessitated a complete revision of the text and a thorough correction of the physical constants to conform to the latest standards. The molecular equations under the Tests for Identity of the ion metals and nonmetals have been changed to ionic equations. The molecular equations in Industrial Methods of Manufacture and in Assays have been retained. The many important advances in industrial manufacturing procedures are included and discussed. All the inorganic salts o organic acids recognized in the current Pharmacopoeia and Formulary have been incorporated. This work may be recommended for its careful exposition of the usual techniques of preparation, for the clarity of its quantitative determinations and for its inclusion of the latest information on all branches of inorganic and pharmaceutical chemistry.

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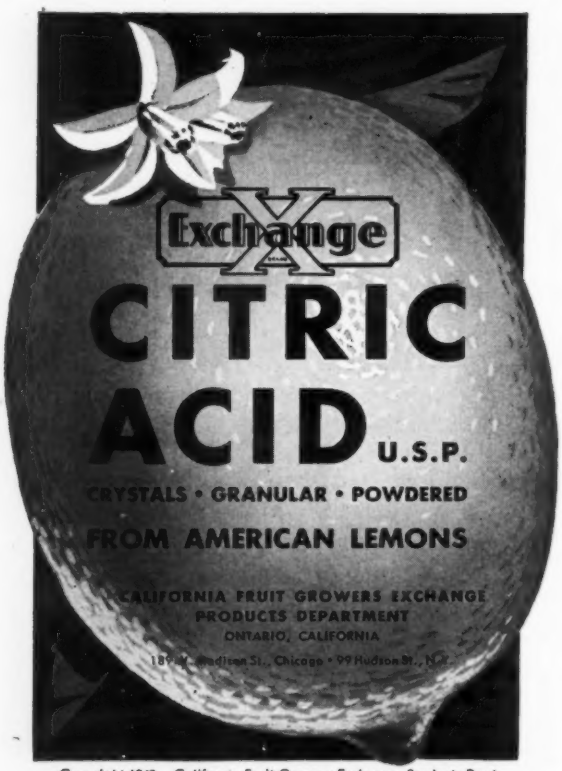

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Vitamins "On the Spot"

(*Continued from page 711*)

ment the lost business in vitamins. These are the amino acids. These products are being eagerly sought after by the people in the know in the medical profession as they are expected to produce great results. However, pharmaceutical manufacturers who have been conducting research in the amino acids for many years have not as yet developed products that can be satisfactorily exploited. One of the outstanding difficulties is the matter of bulk. No one seems to be able to produce products in which the dosage is small, and matter of concentrating them to the extent that a small capsule or tablet will do the trick seems to lie in the distant future if it is ever accomplished at all. Further some of the amino acid products are replusive to take and others are far from stable. However we can rest assured that if, as, and when the recession in vitamin consumption becomes serious, research efforts on the amino acids will be greatly intensified with the likelihood that satisfactory products will be produced.

Lubricating Jellies

(*Continued from page 671*)

A more modern product, listed in a standard reference texts[4] and said[8] to be very practical and satisfactory is made from:

Tragacanth, selected ribbons	**25.0 Gm.**
Boric acid	**12.5 Gm.**
Alcohol	**40.0 Gm.**
Glycerine	**80.0 Gm.**
Solution of formaldehyde	**4.0 cc.**
Methyl salicylate, 1% alcoholic solution	**40.0 cc.**
Water, to make	**1000.0 Gm.**

Dissolve the boric acid in the water and macerate the tragacanth in this solution. Strain through fine cheese cloth and add the remaining ingredients and, finally, sufficient water to bring up to the required weight. Mix thoroughly.

Considerable detail on the preparation of a sterile lubricating jelly based on glycerine and tragacanth was given two years ago in the *American Professional Pharmacist.*[9] Said to yield a clear, effective, bland lubricating jelly, the process given is as follows:

Tragacanth ribbon, U.S.P., extra select	**150.0 Gm.**
Alcohol	**270.0 cc.**
Solution of metholate, colorless (1:1,000)	**630.0 cc.**
Glycerine	**480.0 cc.**
Distilled water, to make	**7,568.0 cc.**

Add the glycerine to about 3,000 cc. of water and heat to boiling in a four-gallon, white enameled vessel. Add the tragacanth to this solution and allow to swell without heat for from 24 to 48 hours, with occasional stirring. Finally strain the mucilage through a few thicknesses of gauze into another enamelled vessel to remove foreign particles. Dilute the alcohol with a volume of water and the solution of merthiolate and add to the mucilage and mix thoroughly. Finally add

sufficient water to make the requisite volume. The quantity of materials made according to this formula produces sufficient jelly to fill about 52 tubes of about six ounces capacity (e.g. 1½ inches by 7 inches).

Because glycerine was a critical material during the early stages of the war—a condition which no longer prevails—attempts were made to prepare lubricating jellies free of this substance. An example of such a product, suggested by McClellan,[10] is given below:

Tragacanth	**35.0 Gm.**
Boric acid	**15.0 Gm.**
Benzoic acid	**0.5 Gm.**
Solution of formaldehyde	**3.0 cc.**
Methyl salicylate	**0.4 cc.**
Alcohol	**120.0 cc.**
Water, to make	**1000.0 cc.**

A somewhat similar formula appears in Prinz's[5] text as a lubricant for surgeon's rubber gloves:

Gum tragacanth	**8 parts**
Boric acid	**4 parts**
Solution of formaldehyde	**1 part**
Alcohol	**32 parts**
Water	**200 parts**
Oil of rose geranium	**sufficient**

Dissolve the boric acid in the water and add the tragacanth. Dissolve the oil in the alcohol, add the formaldehyde solution and mix with the gum solution. It is suggested that this jelly be dispensed in well-stoppered wide-mouthed bottles.

Starch-glycerine combinations may also be employed as bases for lubricating jellies. A surgical lubricant of this type, recommended[4] for catheters, consists of:

Starch	**80.0 Gm.**
Glycerine	**700.0 cc.**
Distilled water	**170.0 cc.**
Boric acid	**50.0 Gm.**
Liquefield phenol	**20.0 cc.**

A mixture of the first three ingredients is heated to boiling, then add the boric acid and warm the mixture until dissolved. Cool, and add the phenol. The resulting product is non-greasy and readily removed with water.

The necessity of conserving rubber medical supplies plus the difficulty of obtaining gums and glycerine posed the war-born problem of making lubricants without these materials. Such products had to meet the high standards of previously available jellies, especially with regard to safety and freedom from deteriorating effects on rubber. Although the supplies situation is now greatly eased, it is of interest that a product to meet the essential requisites was developed by MacKenzie[11] in 1942. He employed a starch-sodium lactate combination for this purpose and clinical tests proved it satisfactory. The lubricating jelly was made as follows:

Starch	**7 ounces 135 grains**
Distilled water	**1 gallon**
Sodium lactate (60%)	**90 fluid ounces**
Mercuric oxycyanide	**280 grains**

Dissolve the mercuric oxycyanide in part of the distilled water; using the remainder of the water to form a

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smooth paste with the starch. Combine these two portions with the sodium lactate and heat in a steam kettle or some other device capable of supplying a temperature of approximately 100° C. The heating, with moderate agitation, is continued until a translucent jelly is formed. At this point the product can be transferred immediately to suitable containers. The lubricant is best sterilized after it has been placed in containers and, according to the latest approved procedure, can be rendered sterile by autoclaving at a steam pressure of 10 pounds (115° C.) for a period of thirty minutes.

Well made, water-soluble, non-greasy lubricating jellies, especially those of the glycerine-tragacanth type, are soothing and emollient in their effects. Hence they are often suggested as being suitable and beneficial in many of the milder skin irritations such as chafing, chapped hands, mild burns, roughness, itching and the like. They are also useful as applications in exanthematous fevers to relieve local irritation. Occassionally, such jellies are employed in treating more severe conditions, as for example, as a covering over sulfonamide-dusted burned areas.[12]

Lubricating jellies of this class are excellent vehicles for medicaments and are frequently employed in this way. Thus glycerine-tragacanth jellies can be modified readily for use as vehicles for making burn ointments[13] or contraceptive jellies.[14] The resemblance between these products is quite apparent in the following rather simple vaginal jelly:[6]

Gum tragacanth	**6 parts**
Glycerine	**10 "**
Boric acid	**5 "**
Water	**100 "**

More specialized products may likewise use modified jellies similar to lubricating preparations. Illustrative is the following electrocardiographic jelly used to assure better contact between the skin and the electrode:[15]

Phenol	**½ oz.**
Potassium bitartrate	**2 oz.**
Gum tragacanth	**4 oz.**
Glycerine	**12 oz.**
Powdered pumice	**1 or 2 lb.**
Sodium chloride	**3 lb.**
Water	**1 gal.**

Heat the tragacanth and glycerine in half the volume of water for six hours. Dissolve the potassium bitartrate and the sodium chloride in the remaining water. Combine and stir the resulting mixture with an electric mixer and heat again for one hour. Add the phenol and pumice, with more water, if necessary, and mix again until of creamy consistency. If desired about one drachm of perfume, like oil of lilac, may be added. The quantity of pumice to be used will depend upon the type of apparatus with which the jelly is to be used. Little pumice is necessary with the amplifier type, while the double quantity is better for use with the string galvanometer type of machine.

In passing, it might also be mentioned that starch glycerite bases may be suitably modified for making vaginal jellies and contraceptive preparations.[16, 17]

Water-soluble lubricating jellies have largely replaced the older types of greasy surgical lubricants. However, since there are doubtless many physicians who find occasion to use these oily products, methods for preparing such items are still of pertinent interest. Formulas for making both the mineral oil and vegetable oil type of product are given in the literature. In using such products it is well to remember that they are not as readily removed as are the water-soluble, greaseless types of lubricants and that they may have deleterious effects upon rubber catheters, gloves and the like unless immediately removed after use.

A typical formula of the mineral oil type is provided in the "Pharmaceutical Recipe Book." Known as "Liquid Parenol," the lubricant consists of:

Light liquid petrolatum	**700.0 cc.**
White wax	**50.0 Gm.**
Distilled water, to make	**1,000.0 cc.**

Melt the wax in the liquid petrolatum, pour the mixture into a warm mortar and gradually add previously warmed water in a sufficient quantity to meet the specified volume. A "shake well" label is required.

In addition to its use as a catheter lubricant, the above mixture also serves as a neutral liniment for the treatment of certain skin diseases.

A British source[18] supplies two formulas for old-fashioned lubricating compounds based on vegetable oils. One of these consists of:

Salol (phenyl salicylate)	**1 part**
Almond oil	**15 parts**
Sterilized castor oil	**15 parts**

The second, known as Lund's oil, was formerly much used as a catheter lubricant and probably still finds some use for this purpose. It is made from:

Almond oil	**20 parts**
Castor oil	**4 parts**
Phenol	**1 part**

Lubricating jellies are valuable members of the medical and surgical armamentarium, with a constant and dependable demand among members of the healing profession. Hence, well made products, especially those of the greaseless, bland, water-soluble types, make excellent specialty items for pharmaceutical manufacturers.

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Perfumer's Zoo

(*Continued from page 669*)

well-known fur-bearing rodent, the beaver. Like the civet, the beaver has been known for its perfume product for many centuries. W. A. Poucher, in his authoritative work, "Perfumes, Cosmetics and Soaps," finds references to castor in seventeenth century literature.

Most of the castor sold in the American and Western European market comes from the Canadian beaver, although a Russian product is also known to exist. The castor is found near the genitals of both male and female beavers, but the animal must be killed in order to remove the valuable follicles. Since beaver-trapping is a major Canadian industry because of the market for the fur, the sale of the castor may be considered as a by-product, and no doubt the cost would be prohibitive if not for the value of the skins.

Castor has an unpleasant odor and taste; the odor is described in fact as being "nauseating," but on dilution becomes weaker and more pleasant. It is today sold either as a tincture or as an extract. It is used in small quantities, is a valuable fixative, and finds widespread favor in imparting a "spicy" or "Oriental" note to perfumes. Its dark appearance and tendency to cause discoloration in perfumes is a point of danger that must be watched and overcome.

The constituents of castoreum have been studied by many chemists, who report finding benzyl alcohol, acetophenone, 1-borneol, among other odoriferous substances in the volatile oil, and in the resinous matter there is a crystalline substance, called castorin, the structure of which has not yet been worked out. Dr. P. G. Stevens of Yale University, whom we shall mention again in connection with his work with muskrats, studied castoreum to determine whether there was a large ring ketone, similar to muscone or civetone, and reported last year that no such substance could be isolated or discovered.

Before leaving the beaver, we should dispose of another animal, which has been frequently mentioned as having possibilities for perfumery, and that is the lowly and much maligned skunk. The skunk, too, has a malodorous substance which it can discharge at will, generally as a protection (as many have learned to their discomfort) against man and animals. Some people have worked with this substance in an effort to make it usable for perfumery, in the hope of finding a new source for an American musk-like fixative. Nothing of value has come out of these efforts, and it is extremely unlikely that anything ever will. The scent glands of the skunk, like those of the mink, weasel and other animals, are anal glands, while those of the musk deer, muskrat and beaver are preputial glands—a difference we cannot afford to overlook.

Furthermore, the odor of skunk is believed to be due to an organic sulfur compound known as a mercaptan, and no one has ever found any extraordinary value for mercaptans in the field of odor chemistry, except to im-

part to natural toxic gases an odor unpleasant enough to act as a warning signal that the gas is escaping.

Unlike the civet and the beaver, the musk that is obtained from the musk deer comes only from the male of the species. The odorous material is not used for protection, but is considered to be associated with the sexual attraction between the male and female.

The deer, a small agile animal, no more than twenty inches high, is killed to obtain the musk, but it has been proven that this is unnecessary. The musk can be reached through an opening without killing the deer, and if they could be trapped and kept in captivity, using the methods employed on the civet as a model, perhaps the slaughter of the animal would be avoided. This is a matter of some significance, because the entire species is threatened with extinction, in spite of the fact that trapping in prohibited by law in parts of Asia.

The method of killing the deer is of more than passing interest. Fast on foot, the use of dogs would be impossible. The deer can be trapped en masse, being driven into a large prepared snare, where they are easily shot. Or they can be trapped individually, by snares placed in their usual paths. Or they can be shot by the huntsman, a difficult proposition because the animals inhabit high mountainous regions that do not lend themselves to hunting. The animals have sharp ears, and the least noise makes it possible for the hunter to lose his quarry. But the deer has been endowed by nature with a keen sense of melody, a love for harmony, and the hunter, taking out his flute, suddenly breaks the stillness with the stirring music. The musically inclined deer comes closer to the spot from which the melody is emanating, and this proves his undoing.

The perfume material coming from the musk deer is sold under a variety of names, the best known being musk tonquin. Of all the animal products, most though not all perfumers would say that this has the characteristic "animal note" to the greatest extent. It is a very powerful odorant, being detectable in most minute quantities, and described by one writer as being "ambrosial," a term which means very little. As a fixative, it is amongst the best in the realm of perfumery, truly one of nature's creations which are indispensable in the making of a fine perfume.

Musk tonquin contains approximately one to two per cent of a cyclic ketone called muscone, of intense odor, an optically active substance whose racemic form has been duplicated synthetically. The synthetic product, however, cannot replace Asiatic musk because it has been obtained in a small yield, by a difficult series of expensive steps, a chemical achievement of the first order but with no immediate practicable applications.

As anyone versed in perfumery would expect, these animal materials have found usage in the field of flavors, closely allied as they are to perfumes. Musk tonquin is used with some frequency in a maple flavor, and is mentioned in raspberry formulas. Castoreum is used in raspberry, rum, claret wine and similar notes, but can be said to "round out" or "give a lift" to the flavor, rather than make a specific contribution to the

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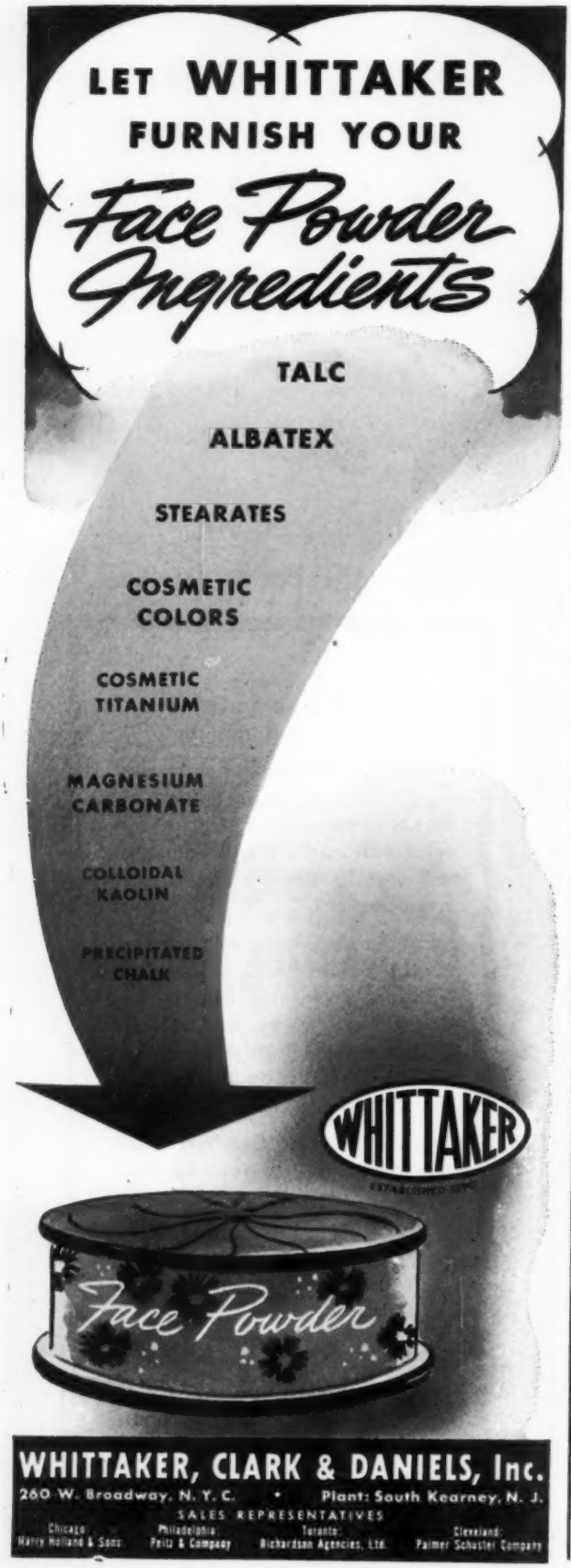


taste. Tincture of civet is found in many formulas, among which we might mention currant, grape, maraschine, pear, strawberry, apple and raspberry.

As a perfume raw material, ambergris is in a class of its own. In the motley group of animal products, none is more legendary, none more valuable. None is better known to the public, none less used by the perfumer. Ambergris has been the subject of sea-faring tales and cursing captain's daydreams.

Ambergris is a substance developed by the whale, and most authorities believe that only the male of the species can give forth ambergris. Many theories have been expounded on why certain whales produce this valuable material. The theory generally accepted is that the whale has a liking for squid (every fisherman has used squid for bait), but the beaks of the squid are indigestible, they irritate the stomach of the whale, and the ill animal forms this substance, known as a calculus, which it can excrete or which may remain inside the whale and eventually cause his death.

The exuded material is lighter than water, and will therefore float, and it has a low melting point, but not low enough to cause any disintegration in the hot sun. In fact, the very best ambergris is considered that which has been floating for years before it is finally discovered.

Ambergris is found in large lumps, worth fabulous sums, or occasionally in somewhat smaller but nevertheless valuable pieces. One single lump is reported to have weighed over three hundred pounds.

The test for true ambergris is extremely difficult, and in the long run becomes a matter for the perfumer rather than the chemist. Many lumps of sea matter have been found that somewhat resembled ambergris, but were rejected by perfumers, and subsequent microscopic analyses have shown that they were not genuine.

For the chemist, ambergris remains one of the great mysteries of perfumery. Work on its analysis has always been hindered by its high price and the uneven and unpredictable availability. But what little work has been done has failed to give any clue as to the odoriferous principle. No one has even isolated such a substance, much less analyzed or duplicated it.

Like the other animal products, ambergris too is a fixative of great value, it is long-lasting and mellowing. It is used in small quantities, in the form of an extract, and its odor has been described as akin to that of labdanum. But this description is inadequate. We are once again forced to describe one odor in terms of another, having no odor vocabulary of our own. If the comparison, for the perfumer, is poor, it is necessary because no one has suggested a better one.

It is fitting to end this summary with a word about the muskrat, which we have already mentioned as the newest contribution to the field of animal products. Like the beaver, the muskrat is a member of the rodent family; its name on the one hand suggests the musk deer, and on the other, its zoological name, Ondatra Zibethiea, is suggestive of the civet. It is not unexpected, then, to find that perfumers have made an effort

for many decades to obtain something valuable from this little animal.

In fact, it did not require students of perfumery to determine that the muskrat had musk possibilities. In 1612, Captain John Smith wrote, in "A Map of Verginia, with a Description of the Countrey, the Commodities, People, Government and Religion;" "Mussacus (muskrat) is a beast of the forme and nature of our water Rats but many of them smell exceedingly strong of muske."

In the middle of the seventeenth century, Father LeJeune wrote in his diary about this animal: "It is called Musk Rat because, in fact, a part of its body smells of musk, if caught in the Spring—at other times, it has no odor."

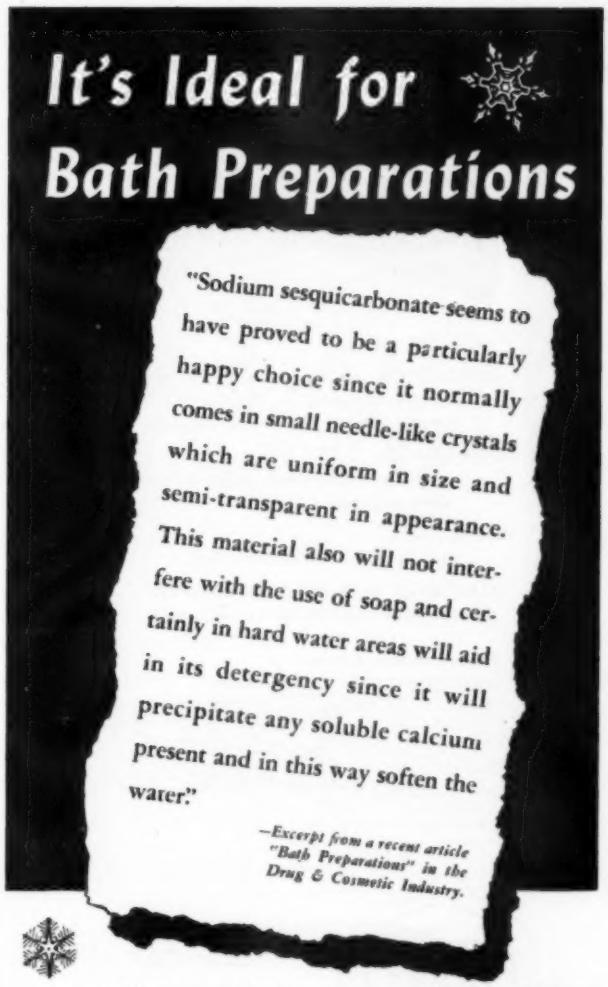
And a few years later, the same author again had occasion to discuss the odor of the muskrat: "There are found in these regions of America, animals to which the French have given the name of Muskrat, because in truth they resemble the rats of France—except that they are much larger—and smell of musk in the Spring. The French are very fond of this odor; the Savages dislike it as if it were a stench."

As long ago as April 1882, we find one R. S. Christiani, in a communication to the editor of The Soap Makers' Journal (New York), recommending to his industry American musk from the muskrat, "the well-known rodent, native of this country, and found in nearly all parts of it, frequenting the streams and marshes, and having habits similar to the beaver." In most books on perfumery, authors have found the muskrat worth mentioning, but culd see no great value in anything obtained from their glands.

And no wonder. For though a musk-like substance was obtained from the glands of the muskrat, it had only a faint odor and little perfume value. It remained for two chemists, Dr. Philip G. Stevens of Yale University, and Dr. J. L. E. Erickson of Louisiana State University, to increase the odor value by about fifty times, by finding that about 98 per cent of the unsaponifiable material in the glands consisted of large cyclic alcohols which are almost odorless and which they established could be oxidized quantitatively to the corresponding ketones.

Chemically, the muskrat product contains principally two compounds known by the names of cyclopentadecanone and cycloheptadecanone. These long words are really quite simple. They mean that we have two saturated cyclic ketones, containing fifteen carbon atoms (*pentadeca*) and seventeen (*heptadeca*) respectively. Considering that the musk principle of musk tonquin is methyl-cyclopentadecanone, and that the fixative qualities of civet are imparted by cycloheptadecenone, we can see how closely related these natural products are to the muskrat product.

The muskrat is trapped in marsh lands in many parts of the United States, but Louisiana has some fifty per cent of the little animals. The scent glands are found in both male and female, but in the latter the gland is so tiny that it is practically worthless. The animal has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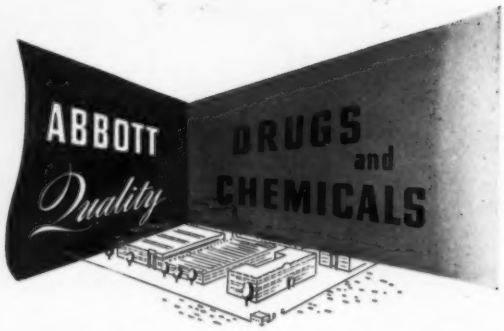

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to be killed to obtain these glands, and then ten ounces of a crude fatty material can be gotten from almost one thousand glands. The ten ounces of the crude yield about three ounces of a neutral musk oil, which is converted into one ounce of the finished product.

That a new natural musk product should have appeared on the scene at this time, amidst the dearth of perfume materials and the flood of orders and demands, is indeed fortunate. It is still too early to say much about the use of this product, except that it may well find its way into the finest perfumes in the years to come. Its odor is powerful, lasting, musky, somewhat finer and less animal-like than Musk Tonquin. Its fixative value is equal in all respects to the Tonquin product, and it serves to round out perfume compositions, blending with odor mixtures of all types. Tests indicate that it can be used either as a replacement for Musk Tonquin, or as an addition product, to improve and exalt the quality of Musk Tonquin.

History and experience will indicate the niche that this new product is to occupy in the science and art of perfumery. But none will deny that the perfumer's zoo, that small and exclusive animal club, now has another very important member.

Dentifrices

(Continued from page 673)

There are many variations of medicated tooth powders possible, but the most popular ones on the market today are those that base their claims on their peroxide content. Formulae for this type are as follows:

I

100 lbs. Precipitated Chalk, light
100 lbs. Precipitated Chalk, dense
10 lbs. Powdered Sugar
25 lbs. Sodium Perborate
4 lbs. Flavor

II

150 lbs. Precipitated Chalk, dense
25 lbs. Magnesium Carbonate
5 oz. Saccharine
4 lbs. Flavor
25 lbs. Calcium Peroxide

The dissolving types of tooth powders consist of combinations of entirely water soluble substances like borax, salt, sodium bicarbonate and sodium perborate. Sodium perborate which was used in the pure state several years ago has been quite generally criticized because it is claimed to be deleterious when used in the mouth.

The modus operandi for tooth powders is comparatively simple. The procedure is first to pre-mix the flavor, color, sweetener and other ingredients present in small quantities into a portion of the chalk or other abrasive by rubbing the liquids in by hand and then through a sieve or preferably through a small premixer equipped with a brush sieve. This mixture is then screened and blended in a larger mixer into which the rest of the powdered ingredients have been added. The agitator is run until the mass is uniform, when it is

run into storage and filled by the common types of dry filling equipment.

Tooth pastes or dental creams are not so simply compounded as dental powder. Unless the making operations are carefully carried out, later defects are apt to appear in the finished product during shelf life. It is quite common knowledge that tooth pastes are bad actors and often deteriorate for some unknown cause. Any tooth paste manufacturer will verify this, for such occurrences come up when least expected. The making of these products then, requires most careful attention. The mixers, ointment mill and filling equipment should all be adapted to the best type for the particular product being made. Consistencies of tooth pastes vary very materially, so a mixer for one type of paste may not be adapted for another. Even after the mixing operation is uniform, it is very desirable to pass the product through an ointment mill to mill out the lumps or undistributed materials and produce a more homogeneous and smoother product. The equipment required then, is a jacketed or tin lined stainless steel kettle to prepare various mucilages and glyceride of starch, tanks to hold the flavors, a properly designed mixer and an ointment mill. All this equipment should be made from materials that will not affect the color or taste, like tin lined copper, glass lining or stainless steel. Not only does this prevent the discoloration of the paste, but small quantities of heavy metal like iron and copper are apt to affect the taste of the product adversely. We have already referred to this in discussing the war-time collapsible tubes, wherein we pointed out that these have resulted in some discoloration and off flavor. The facility with which the mixer and other equipment can be cleaned should also play an important place in its selection. In addition to this proper type tube filling equipment to package the material is required.

The composition of tooth pastes varies considerably. They can be classified in different ways, but the simplest method to classify them for our purpose is according to their foaming or lathering ability. We can, by this method, put them into three classes, those with no foaming properties, those with slight foaming properties and those with high foaming qualities. The amount of foam produced during use is, of course, dependent upon the amount and kind of wetting agent or soap used in the product. A typical formula for a tooth paste made without soap or foaming ability follows:

5 lbs. Simple Syrup USP
5½ lbs. Mineral Oil, heavy
111½ lbs. Glyceride of Starch USP
83 lbs. Precipitated Chalk, light
2 lbs. Magnesium Carbonate
5 lbs. Calcium Sulfate
36 lbs. Milk of Magnesia USP
2½ oz. Saccharine
2 oz. Gum Tragacanth
4 oz. Flavor

As a premise to all directions in making tooth paste, it is pointed out that all the tooth paste ingredients which we will consider, and this applies particularly to liquid ingredients, are taken by weight and not by

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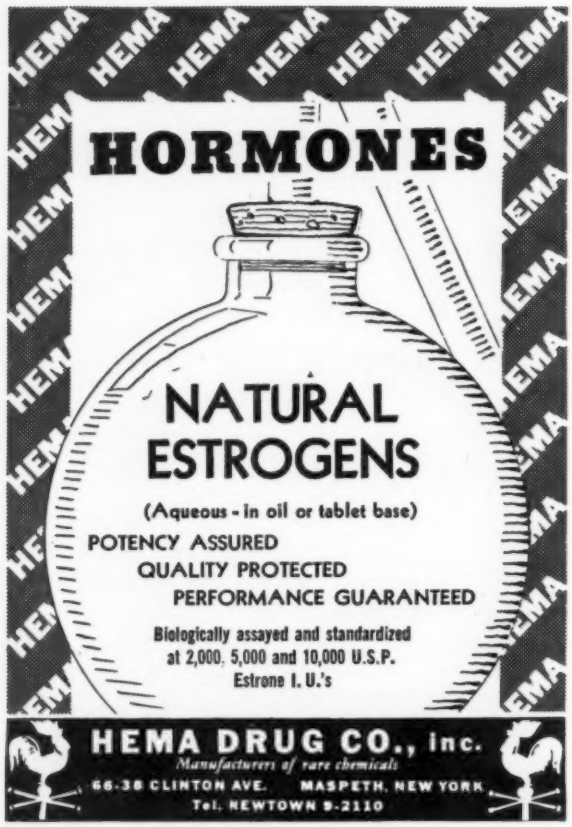

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volume for the obvious reason that temperature changes will increase and decrease the volume of liquids.

The formula which we have selected may be classed as a milk of magnesia type of dental cream. It includes more ingredients than are usually found in a tooth paste and has been particularly selected for this reason. The steps in putting this formula together follow this procedure:

1. The simple syrup, glyceride of starch and milk of magnesia are prepared beforehand. It is good policy to make these up in sufficient quantities to take care of as many batches as conditions dictate. These are all made according to the USP XI directions or variations may be desirable in the making of the milk of magnesia by more facile methods than those outlined in the Pharmacopoeia.

2. The gum tragacanth is mixed with part of the hot water employed in making glyceride of starch, and is filtered into this as the glyceride is cooling. To blend the ingredients, the simple syrup, mineral oil, glyceride of starch, milk of magnesia and flavor are weighed and put into the mixer. The saccharine is pre-mixed with the calcium sulfate. This mixture is first added to the liquids while the agitator is running. Then the rest of the abrasives are gradually added and the mixing is continued until the mass is homogeneous. It is then passed through an ointment mill, after standing over night, run to the storage tank which feeds directly to the filling machine, tested for consistency and other properties, and filled.

It is quite simple to convert this formula into a foaming type of tooth paste by the addition of alkyl or alkyl aryl sulfate by merely replacing a part of the chalk with these wetting agents. These may be incorporated anywhere from one per cent to five per cent, depending upon the amount of lathering quality desired. The incorporation of wetting agents in dental creams does not offer the same difficulty as the addition of soap.

Two formulae for tooth paste made with medium quantities of soap follow:

I

1. Make up a mucilage paste in a glass lined or stainless steel jacketed kettle, equipped with a mixer by charging it with 75½ lbs., glycerine USP, start the agitator and gradually add in small quantities 4½ pounds powdered Irish Moss, ground to pass at least 120 mesh. Continue to mix at room temperature until the mass is uniform. This takes about half an hour. Turn the heat onto the jacket and heat to 212 degrees F., with the mixer running until all the Irish Moss is dispersed.

Dissolve 6½ oz. soluble Saccharine and any color if desired in two pounds of distilled, hot water. Stir this well with a paddle and add to the Glycerine-Irish Moss mixture above.

Add 25 pounds distilled water and keep the temperature at 212 degrees F. Continue the mixing, shut off the heat and agitate while cooling. Cool down to about 120 degrees F. and strain off the mucilage through a muslin cloth or suitable filter.

2. Make up a soap mixture by following these directions:

First dissolve 7¾ pounds Sodium Carbonate USP in 47½ pounds of distilled water by heating to about 180 degrees F. Melt 7¾ pounds Stearic Acid XXX in a glass lined vessel.

Transfer the Sodium Carbonate solution to a suitable mixer and add the molten Stearic Acid in a thin steady stream, stirring the soap well, but slowly to prevent aerating it too much. Continue the mixing until it is uniform, keeping the soap hot. Then with the agitator running, gradually add 12 pounds 13 ounces of Neutral White Soap and when the soap mixture is uniform and smooth, it is ready for use.

3. Transfer the strained mucilage base to a pony or other suitable type mixer. Add the soap mixture and stir the two together.

With the mixer running, gradually add 116½ pounds light Precipitated Chalk. Reduce the speed of the mixer and add 307 pounds of water distilled. Continue to mix until the mass is homogeneous, scraping down the sides of the mixer and the agitator blades occasionally. When uniform, remove the finished paste to tubs or small tanks. Let it stand over night and the next morning pass it through an ointment mill, after which the product may be examined for consistency and other characteristics. Then fill it.

II

1. In a tinned-copper, jacketed kettle heat a mixture of 20 pounds of Propylene Glycol and 51½ pounds of Glucose (Sweetose type) to about 220 degrees F. Dissolve 4 ounces of salt in 8¼ pounds of distilled water and then stir in 9 pounds redried starch. Stir well to wet the starch and add this mixture gradually to the hot Glycol-Glucose mix, continuing the agitation with a wooden paddle if it is so desired. Continue to heat at boiling temperature until the mass is transparent and smooth.

2. Make an Irish Moss Mucilage by adding 6 pounds of Irish Moss, picked free from extraneous material, in 384 pounds of boiling hot distilled water. Stir well to extract the Moss and permit the temperature to drop to about 100 degrees F. Strain the mucilage through a muslin cloth and dissolve 12 ounces of Benzoic Acid therein. Bring the yield up to exactly 360 pounds with cold distilled water. This batch represents sufficient Irish Moss Mucilage for five batches of tooth paste.

3. Transfer 72 pounds of Irish Moss Mucilage into a suitable mixer. Add the Glycol-Glucose solution above while it is still warm and sift in while agitating:

13¾ Pounds Neutral White Soap
3¼ pounds Benzoic Acid
½ pound Saccharine

Stir until smooth and add the flavor. If Menthol is used be sure to dissolve it in the flavoring oils before adding. About 4 pounds of flavor are used for a batch this size. Continue the mixing, then add gradually in 25 pound lots, stirring between additions

115 lbs. Light Precipitated Chalk
8½ lbs. Calcium Sulfate (Chrysalba)

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When this has all been mixed in, finally add 45 pounds Magnesium Hydroxide Paste (Hydro Magma Paste); mix until uniform after all the ingredients have been added. This takes about one-half an hour. Let stand over night and then cool and fill.

It will be noted that the above formula contains no glycerine. If it is desired to use this, Glycerine may be used in amount equal to the sum of the weight of the Propylene Glycol and Glucose indicated. The methods of making are exactly the same.

A tooth paste with a high soap content and containing no water has the following composition:

96½ lbs.	Neutral White Soap
82 lbs.	Light Precipitated Chalk
88 lbs.	Alcohol Specially Denatured 31-A (20 lbs. Neutral White Soap not over 5% moisture and 100 lbs. Glycerine added to 100 gallons Ethyl Alcohol.)
80½ lbs.	Glycerine USP
35 oz.	Benzoic Acid

To put together this type of dental cream, first make an essence of the Alcohol, Glycerine, Benzoic Acid and Flavor. Charge into a mixer, preferably covered, the soap and the chalk and blend them by mixing. Add the essence gradually to this soap-chalk mixture and continue stirring until the mass is smooth. Cool the paste and fill as soon as possible.

Before we leave our discussion of tooth pastes it should be pointed out that due to variations of raw materials, a uniform and proper consistency is not obtained under all conditions by the above formulae. For that reason it is necessary to make adjustments in liquid or solid ingredient proportions in order to obtain the desired consistency.

Liquid dentifrices do not occasion as much detail in manufacture as pastes. The equipment required for their manufacture is more simple, consisting usually of a liquid mixing tank, storage tanks, and filling and closing equipment. The tanks should either be built from stainless steel or be glass lined. It is also advantageous to provide a suitable filter for the finished liquid before it is filled into the bottle.

For the purpose of focusing our attention on the methods used for making these three formulae, one of the older type and two of the newer type of liquid dentifrices are presented.

The formula for the older type which was used extensively in past years and still has popularity has this composition:

70 lbs.	Olive Oil Castile Soap
43 gals.	Alcohol Specially Denatured 38-B
3 lbs.	Borax
½ lb.	Saccharine Soluble
40 lbs.	Glycerine
43 gals.	Water Distilled
12 lbs.	Flavor
Q.S.	F.D.A. Cert. Red Color (Amaranth Red)

To put this formula together, thoroughly dissolve the soap in 40 gallons of distilled water, heated to almost the boiling point, cool down to about 90 degrees F., dissolve the borax and color in the remaining or three

gallons of hot water and add to the soap solution. Dissolve together the flavor, glycerine and alcohol and pour into the soap solution. Mix well with the liquid stirrer in the mixing tank. Transfer to a storage tank and let the product stand for ten days to clarify. Then filter and fill.

This older type of liquid dentifrice has been largely superceded, in recent years, by those made with the aid of wetting agents. This has simplified the making procedure. Two formulae for this type of product follow:

I

180 lbs.	Glycerine
160 lbs.	Crystal Sugar
1 lb.	Saccharine
50 lbs.	Wetting Agent (Lauryl Sulfate)
40 lbs.	Salt
40 lbs.	1% Amaranth Red Color in Water
466 lbs.	Water Distilled
500 lbs.	5% Quince Seed Infusion in Water
540 lbs.	Alcohol S.D. 38-B
Q.S.	Flavor

II

1½ lbs.	Irish Moss Extract (Carajel or Agagel)
8 lbs.	Alkyl Aryl Sulfate (Nacconol LAL)
75 lbs.	Alcohol S.D. 38-B
300 lbs.	Water Distilled
½ lb.	Salt
5 lbs.	1% Amaranth Red Color in Water
2 lbs.	Flavor

To make either of these the Irish Moss or Quince Seed are first dispersed in hot water and filtered into the mixing tank, then the wetting agent is dissolved in this dispersion followed by the sugar, salt and color. Lastly the alcohol, in which the flavor has been dissolved, and the glycerine are mixed in. This solution is permitted to stand for from five to ten days for thorough clarification, after which it is filtered and filled.

In concluding this article, it may again be emphasized that the public are "good-tooth" conscious. They desire teeth like gleaming white pearls, pink, firm, healthy gums and a non-offensive breath. Dentifrices alone cannot obtain these conditions. They do go far in preventing deterioration of the teeth if used faithfully in conjunction with proper diet, which consists of ample intake of milk, citrus fruits, vegetables, and green salads. It is also necessary that regular visits be made to the dentist at least twice a year for the removal of tartar which will form in spite of dentifrices, together with necessary dental attention in other directions like filling of caries. The word of the dentist himself in most cases goes further than the claims made in the advertising propaganda for these preparations. It is not easy or even possible to get most dentists to endorse any particular brand of dentifrice, but it is not difficult to arouse his ill will through false and misleading claims for a dentifrice. For that reason the more successful merchandisers of these preparations emphasize the advantages of good diet and regular visits to the dentist as a wise course in presenting their product to the public. While the market is well supplied in this field, quality honest, and well presented dentifrices will continue to obtain their share of the business.

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PRODUCTION CHEMICAL ENGINEER—Major experience, plant management foods, drugs, tablets, cosmetics, soaps and insecticides. Minor supervision production in heavy chemicals and synthetic rubber evaluation in development field. Responsible, efficient and cost-minded. Desires position in production management, Age 36, Married. Salary $6000. Box 632, DRUG & COSMETIC INDUSTRY.

MEDICAL DIRECTOR, available in the near future, for past five years medical director of a large eastern pharmaceutical firm in charge of research.
VETERINARIAN, recently honorably discharged from Army, experience in biological research, assistant professor of animal pathology, eastern university, and 12 years director of veterinary research, production and laboratory administration, large ethical eastern firm.
DETAILER AND DISTRICT SALES MANAGER, available for southern New England territory, college graduate, pre-med. Johns Hopkins, 8 years experience as detailer and district sales manager, ethical firms.
PHARMACEUTICAL CHEMIST, drug development and production, laboratory experience, chemistry research and development, $4000 up. THE NEW YORK MEDICAL EXCHANGE, 489 FIFTH AVE., SUITE 605, NEW YORK.

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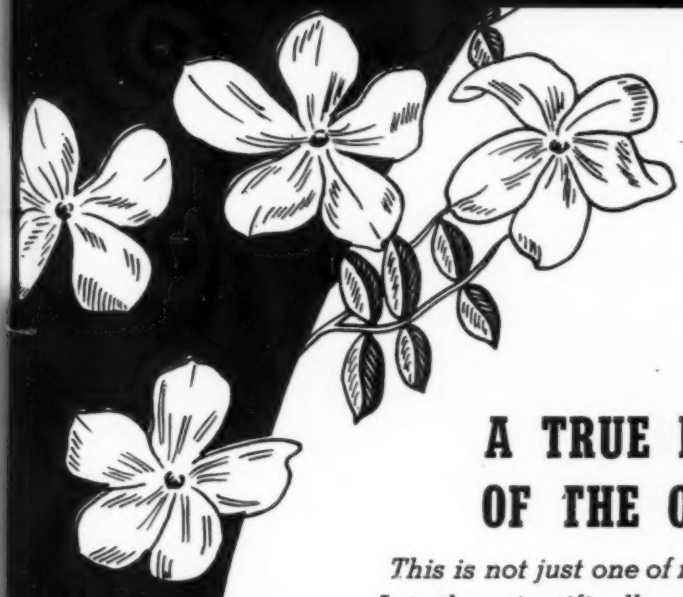

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